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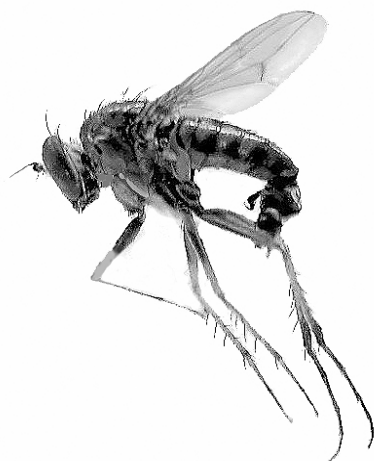
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**Review of Afrotropical  
Dolichopodinae  
(Diptera: Dolichopodidae)**

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# Review of Afrotropical Dolichopodinae (Diptera: Dolichopodidae)

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## Abstract.

Descriptions of 61 new species, new records for known African species are given. Holotypes of 40 and paratypes of 6 more species have been examined from the collections of European museums. The genus *Katangaia* PARENT is synonymized with *Polymedon* OSTEN SACKEN, *Pseudohercostomus* STACKELBERG with *Paracleius* BIGOT. The following pairs of species are also synonymized: *Dolichopus flavocrinitus* BECKER (= *Dolichopus luteitarsis* PARENT), *Paracleius confusibilis* (PARENT) (= *Pelastoneurus benoiti* VANSCHUYTBROECK), *Paracleius micrurus* (PARENT) (= *Paraclius vadoni* VANSCHUYTBROECK), *Tachytrechus bracteatus* (WIEDEMANN), (= *Hercostomus muscarius* SPEISER) and *Tachytrechus tessellatus* (MACQUART) (= *Hercostomus ponderosus* FREY). New name is also given: *Polymedon octavianus* nom. nov. for *P. longifacies* (PARENT), nec BECKER. A revised catalogue and keys to 8 genera and 164 Afrotropical species of Dolichopodinae are also presented.

**Key words:** Diptera, Dolichopodidae, Dolichopodinae, *Argyrochlamys*, *Dolichopus*, *Hercostomus*, *Lichtwardtia*, *Ludovicius*, *Paracleius*, *Polymedon*, *Tachytrechus*, new species, new synonymy, new name, new record, keys, catalogue, Tropical Africa.

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## Introduction

The last revision of the subfamily Dolichopodinae on a continental scale was published by Stackelberg (1930-1941) for Palaearctic. Becker (1921-1922) reviewed Orient (separately) and both Americas in one book. A few generic revisions have appeared later worldwide. Many genera have never been revised. The subfamily in African tropics and Australian region has also never been revised in a monograph. Some taxonomic changes were made in regional catalogues (mainly) and keys (less often) in 1960-80s without serious explanations and preliminary revisionary works. A few authors of these compilations contradict each other in many examples. The Afrotropical species of Dolichopodinae are poorly known. The last catalogue of Afrotropical Dolichopodinae (DYTE and SMITH, 1980) listed 101 species (including two "undescribed species") belonging to 9 genera. GRICHANOV (1998a, 1998b, 1999) has recently reviewed the genera *Hercostomus* LOEW, *Lichtwardtia* ENDERLEIN and *Tachytrechus* HALIDAY. He has described 25 new species from the Afrotropical Region, placing in synonymy 13 known names. A record of an undescribed species of the genus *Hypophyllus* LOEW from "Southern Arabia" by DYTE and SMITH (1980) belongs probably to *Hercostomus scotti* GRICHANOV. A record of an undescribed species of the genus *Pseudohercostomus* STACKELBERG by the same authors is referred to *Paracleius echinatus* (STACKELBERG) in this paper. The genus *Katangaia* PARENT is transferred here to the subfamily and synonymized with the genus *Polymedon* OSTEN-SACKEN. All catalogued species of the genus *Dolichopus* LATREILLE are excluded here from the genus or from the fauna of Afrotropics, although several more species of the genus and one species of *Ludovicivicius* RONDANI are recorded for the region in this paper.

Now 8 genera and 164 Afrotropical species of Dolichopodinae are known from the Region. *Paracleius* BIGOT and *Tachytrechus* are almost cosmopolitan genera. *Dolichopus* and *Hercostomus* are mostly Holarctic genera, *Polymedon* is a Pantropical genus; *Lichtwardtia* is a Paleotropical genus, *Argyrochlamys* LAMB seems to be the same, associating with crabholes along the seacoasts of Indian Ocean and southern Atlantic. The numbers of Afrotropical species belonging to dolichopodine genera are as follows: *Paracleius* (75), *Hercostomus* (47), *Lichtwardtia* (16), *Tachytrechus* (15), *Dolichopus* (4), *Argyrochlamys* (3), *Polymedon* (3) and *Ludovicivicius* (1). The major fraction of valid Afrotropical species is described by C.H. CURRAN (14), O. PARENT (34) and I.YA. GRICHANOV (86).

The well-known fauna of Congo (Kinshasa) comprises 68 species; South Africa numbers 30, Tanzania 22, Kenya 18, Ivory Coast 18, Uganda 17, Cameroon 16, Nigeria 13, Malawi 9, Angola 8 and Namibia 7. Only 7 species were recorded from Madagascar, 3 from the Seychelles and 2 from Mauritius. The widest distribution patterns of species are as follows: *Argyrochlamys impudicus* LAMB - Seychelles, Mauritius, Sri Lanka, Chagos Archipelago; *Dolichopus fes-*

*tivus* HALIDAY - Europe, Ivory Coast; *D. flavocrinitus* BECKER - Egypt, Turkmenistan, Senegal; *D. sabinus* HALIDAY - Europe, Tanzania. *Paracleius emaculatus* PARENT - Congo (Kinshasa), Ivory Coast, St. Helena; *Tachytrechus tessellatus* MACQUART - Senegal, Gambia, Cape Verde Is., Nigeria, Cameroon, Congo (Kinshasa), Burundi, Tanzania, Kenya, Aldabra, Ethiopia, South Africa, Swaziland, Malawi, Angola, Namibia, Botswana, Mozambique, Madagascar, Mauritius, Seychelles, Socotra; Egypt, Israel; Oriental Region, New Caledonia.

The subfamily Dolichopodinae is comparatively well defined (after ROBINSON, 1970): stylus dorsal, rarely apical; postpedicel usually somewhat enlarged; scape usually with hairs above; head slightly depressed behind the vertex; epypharyngeal armature serially denticulate, with four prongs; pseudotracheae barred or geminately sclerotized; thorax narrow, usually with biserial acrostichals; posterior slope of mesonotum not flattened; upper proepisternum with some hairs;  $M_{1+2}$  usually unbranched. Femora with preapical setae. Hypopygium usually very large; female oviscapt with a crest of dornen (acanthophorites) on 9<sup>th</sup> segment.

## Material and methods

Treating material from the collections of several European and African museums, I have found a lot of additional material on the subfamily Dolichopodinae. Holotypes of 40 and paratypes of 6 more old species were examined. Descriptions of 61 new species, new records for known African species are given and 5 species are synonymized in this paper. A revised catalogue and keys to all Afrotropical dolichopodine species are also presented.

Holotypes and paratypes of the new species and other material examined are deposited in the following collections:

BMNH - the Natural History Museum, London;  
HNHM - the Hungarian Natural History Museum, Budapest;  
ISNB - the Royal Institute for Natural Sciences, Brussels;  
MNHP - the Museum of Natural History, Paris;  
MZLU - the Zoological Museum, Lund University, Sweden;  
NHRS - the Swedish Museum of Natural History, Stockholm;  
NMNW - *Namibian National Insect Collection*, National Museum of Namibia, Windhoek;  
NMP - the Natal Museum, Pietermaritzburg, South Africa;  
RMCA - the Royal Museum for Central Africa, Tervuren, Belgium;  
SMFD - the Senckenberg Museum, Frankfurt, Germany;  
SMNS - the State Museum of Natural History, Stuttgart, Germany;  
TAU - the Department of Zoology, Tel Aviv University, Israel;  
ZIUK - the Zoological Institute, Kiel University, Germany;  
ZMA - the Zoological Museum, Amsterdam;  
ZMC - the Zoological Museum, Copenhagen;

ZMH - the Zoological Museum, Helsinki.

Hypopygia removed from dry specimens are placed after alkalisation into glycerol and mounted on the same pin in a cavity of polymer film covered with a piece of adhesive tape. Most part of the material collected from Ivory Coast, Gabon, Botswana and Madagascar is kept in 70% alcohol inside glass tubes and cans. In addition, some specimens are also placed after alkalisation into glycerol and mounted on pin. Listing material examined, I use here slashes ( / ) to separate labels on one pin and square brackets [ ] to insert my personal remarks. Species diagnosis includes usually key characters and some important features that were missed in original descriptions. Terminology of the antenna morphology has been corrected according to STUCKENBERG (1999). The third antennal segment is named here as postpedicel rather than first flagellomere in my previous papers, and arista is renamed as stylus. The relative lengths of the antennomeres and podomeres are representative ratios and not measurements. Designation “wing 3.1/1.1” means wing length: 3.1, wing width: 1.1 mm. Exclamation mark “(!)” in “Distribution” section means new species for a country. Bibliography includes works published after the “Catalogue of the Diptera of the Afrotropical Region” (DYTE and SMITH, 1980).

## CATALOGUE OF AFROTROPICAL SPECIES OF DOLICHOPODINAE (for references see DYTE and SMITH, 1980)

### Genus *Argyrochlamys* LAMB

**Argyrochlamys** LAMB, 1922: 391. Type-species: *Argyrochlamys impudicus* LAMB, 1922, by original designation.  
=*Camptoneura* PARENT, 1930: 110. Type-species: *Camptoneura decolor* PARENT, 1930 [= *Argyrochlamys impudicus* LAMB, 1922], by monotypy. [Junior homonym, preoccupied *Camptoneura* FIEBER, 1858].

**angolensis** GRICHANOV, **spec. nov.** - Angola.

**erythraeus** GRICHANOV, **spec. nov.** - Eritrea.

**impudicus** LAMB, 1922: 391. Seychelles; Mauritius, Sri Lanka, Chagos Archipelago.

=*decolor* PARENT, 1930: 111 (*Camptoneura*). Mauritius.

### Genus *Dolichopus* LATREILLE

**Dolichopus** LATREILLE, 1796: 159. Type-species: *Musca unguata* LINNAEUS, 1758, by designation of LATREILLE (1810:443) [*Dolichopus* originally proposed without included species: LATREILLE'S designation from first two included species (LATREILLE, 1802:439-440)].

=*Ragheneura* RONDANI, 1856: 144. Type species: *Dolichopus griseipennis* STANNIUS, 1831, by original designation.

=*Hygroceleuthus* LOEW, 1857b: 10. Type-species: *Dolichopus latipennis* FALLÉN, 1823, by designation of COQUILLET (1910:554).

=*Spathichira* BIGOT, 1888: 24. Type species: *Dolichopus funditor* LOEW, 1861, by original designation.

=*Macrodolichopus* STACKELBERG, 1933: 109. Type species: *Dolichopus diadema* HALIDAY, 1831, by original designation.

=*Eudolichopus* FREY, 1915: 10. Type species: *Musca plumipes* SCOPOLI, 1763, by designation of STEYSKAL, 1973.

=*Melanodolichopus* FREY, 1915: 10. Type species: *Dolichopus stenhammari* ZETTERSTEDT, 1843, by designation of STEYSKAL, 1973.

=*Leucodolichopus* FREY, 1915: 10. Type species: *Dolichopus remipes* WAHLBERG, 1839, by designation of STEYSKAL, 1973.

### Subgenus *Dolichopus* LATREILLE

=*Ragheneura* RONDANI

=*Spathichira* BIGOT

=*Eudolichopus* FREY  
 =*Melanodolichopus* FREY  
 =*Leucodolichopus* FREY

**afroungulatus** GRICHANOV, **spec. nov.** South Africa, Ethiopia.  
**festivus** HALIDAY, 1832: 361. Europe; Ivory Coast.  
 =*cilifemoratus* STANNIUS, 1831: 52 (nec Macquart, 1827)  
 =*macquarti* STAEGER, 1842: 17  
**flavocrinitus** BECKER, 1902: 65. Egypt; Turkmenistan; Senegal.  
 =*luteitarsis* PARENT, 1932: 229 (as a var. of *Dolichopus flavocrinitus* BECKER, 1902). Turkmenistan, **syn. nov.**  
**sabinus** HALIDAY, 1838: 184, Ireland; Europe; Tanzania.  
 =*pictus* STAEGER, 1842: 31.

### Genus *Hercostomus* LOEW

**Hercostomus** LOEW, 1857b:9. Type-species: *Sybistroma longiventris* LOEW, 1857, by original designation.  
 =*Achantipodus* RONDANI, 1856:144 [nomen oblitum]. Type species: *Dolichopus regalis* MEIGEN, 1824, by original designation.  
 =*Gymnopternus* LOEW, 1857:10. Type species: *Dolichopus cupreus* FALLÉN, 1823, by subsequent designation of COQUILLET (1910: 548).  
 =*Dasyarthrus* MIK, 1878:5. Type species: *Gymnopternus inornatus* LOEW, 1857, by monotypy.  
 =*Poecilobothrus* MIK, 1878:3. Type species: *Dolichopus regalis* MEIGEN, 1824, by original designation.  
 =*Platyopsis* PARENT, 1929:12 (as subgenus). Type species: *Hercostomus (Platyopsis) maroccanus* PARENT, 1929, by monotypy.  
 =*Chaetosphyria* ENDERLEIN, 1936:109. Type species: *Dolichopus regalis* MEIGEN, 1824, by original designation.  
 =*Microhercostomus* STACKELBERG, 1949:687 (as subgenus). Type species: *Hercostomus (Microhercostomus) dilatitarsis* STACKELBERG, 1949, by original designation.

### Subgenus *Hercostomus* LOEW

=*Dasyarthrus* MIK  
 =*Microhercostomus* STACKELBERG

**afar** RONDANI, 1873:291 (*Dolichopus*). Ethiopia.  
**argyropus argyropus** LOEW, 1858c:372 [1860c:348] (*Gymnopternus*). South Africa; Zimbabwe, Botswana.  
**argyropus par** PARENT, 1934a:129 (as *Hercostomus par* PARENT). Kenya; Tanzania, Congo (Kinshasa), Uganda, Burundi, Angola, Namibia, Botswana,

Rwanda, Malawi.  
 =*par* PARENT, 1933b:1 [*Nomen nudum*].  
 =*pulchripes* VANSCHUYTBROECK, 1951c:58. Congo (Kinshasa).  
**balensis** GRICHANOV, **spec. nov.** Ethiopia.  
**blagoderovi** GRICHANOV, 1999:12. Kenya.  
**caprivi** GRICHANOV, **spec. nov.** Namibia.  
**congoensis** CURRAN, 1925a:114 (*Dolichopus*). Congo (Kinshasa); Burundi, Kenya, Uganda.  
 =*longipilus* PARENT, 1933b:1, *Nomen nudum*.  
 =*longipilus* PARENT, 1934a: 128. Congo (Kinshasa).  
 =*bururiensis* VANSCHUYTBROECK in GRICHANOV, 1999:9, *Nomen nudum* (in coll.; described as *Hercostomus fuscipennis* VANSCHUYTBROECK, 1964a:136, nec MEIGEN, 1824).  
 =*fuscipennis* VANSCHUYTBROECK, 1964a:136 nec MEIGEN [Junior homonym, preocc. *fuscipennis* MEIGEN, 1824] (holotype labelled as *Hercostomus bururiensis* VANSCHUYTBROECK).  
 =*vanschuytbroeckii* DYTE et SMITH, 1980:451 (new name for *Hercostomus fuscipennis* VANSCHUYTBROECK).  
**dimidiatus** CURRAN, 1939d:1. Zimbabwe.  
**directus** WALKER, 1849:663 [female] (*Dolichopus*). South Africa.  
**disjectus** CURRAN, 1926c:397 [female]. South Africa; ?Tanzania.  
**duviardi** COUTURIER, 1978:220. Ivory Coast; Congo (Kinshasa), Uganda, Gabon.  
**enghoffi** GRICHANOV, 1999:15. Tanzania  
**eronis** CURRAN, 1926c:397 (female); 1939:1 (male in key). South Africa; ?Madagascar, Tanzania, Burundi.  
**freidbergi** GRICHANOV, **spec. nov.** Tanzania.  
**garambensis** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**golubtsovi** GRICHANOV, 1999:13. Uganda.  
**infirmus** PARENT, 1933b:1 [female]. Congo (Kinshasa).  
**intercedens** GRICHANOV, **spec. nov.** Equatorial Guinea, Congo (Brazzaville).  
**itineris** GRICHANOV, **spec. nov.** Cameroon.  
**jani** DYTE, 1957:39. Tanzania; Congo (Kinshasa), Cameroon, Malawi.  
**kefaensis** GRICHANOV, **spec. nov.** Ethiopia.  
**krivokhatskii** GRICHANOV, 1999:31. Congo (Kinshasa), Central African Republic.  
**krivosheinae** GRICHANOV, 1999:25. Uganda, Cameroon.  
**laanmae** GRICHANOV, 1999:31. Tanzania, Gabon.  
**liktor** PARENT, 1937b:1. Congo (Kinshasa); Nigeria, Cameroon, Ivory Coast.  
**minimixtus** DYTE et SMITH, 1980:451. Congo (Kinshasa).  
 =*minus* PARENT, 1937b:2. [Junior homonym, preocc. *minus* ZETTERSTEDT, 1849].  
**mostovskii** GRICHANOV, 1999:26. Uganda.

**nectarophagus** CURRAN, 1924a:470. South Africa; Tanzania, Uganda, Cameroon.  
**ngozi** GRICHANOV, **spec. nov.** Tanzania.  
**ovchinnikovae** GRICHANOV, 1999:33. Congo (Kinshasa), Ivory Coast.  
**ozeroi** GRICHANOV, 1999:21. Uganda, Kenya, Ethiopia.  
**panteleevae** GRICHANOV, 1999:34. Congo (Kinshasa).  
**patellitarsis** PARENT, 1934a:129 (*Hypophyllus*). Zimbabwe, Tanzania.  
**perturbus** CURRAN, 1924a:225. South Africa.  
**pseudolictor** GRICHANOV, **spec. nov.** Guinea, Ivory Coast.  
**rezniki** GRICHANOV, **spec. nov.** Cameroon, Ivory Coast.  
**rhodesiensis** PARENT, 1939:273. Zimbabwe.  
**scharffi** GRICHANOV, 1999:36. Tanzania.  
**scotti** GRICHANOV, 1999:19. Yemen.  
**selikhovkini** GRICHANOV, 1999:17. Tanzania.  
**straeleni** VANSCHUYTBROECK, 1951c:55. Congo (Kinshasa); Uganda.  
**strictilamellatus** PARENT, 1937b:2. Congo (Kinshasa).  
**tobiasi** GRICHANOV, 1999:27. Cameroon.  
**transitorius** PARENT, 1934b:1 [female]. Congo (Kinshasa).  
**turneri** GRICHANOV, 1999:36. South Africa.  
**ultimus** PARENT, 1935a:119. Congo (Kinshasa), Kenya.  
**wittei** GRICHANOV, 1999:23. Kenya, Congo (Kinshasa).  
**yakovlevi** GRICHANOV, 1999:20. Kenya.

#### Genus *Lichtwardtia* ENDERLEIN

**Lichtwardtia** ENDERLEIN, 1912: 406. Type-species: *Lichtwardtia formosana* ENDERLEIN, 1912 [= *Dolichopus ziczac* WIEDEMANN, 1824], by original designation.  
 = *Vaalimyia* CURRAN, 1926: 398. Type-species: *Vaalimyia violacea* CURRAN, 1926 [= *Dolichopus angularis* MACQUART, 1842], by original designation.

**aethiopica** BEZZI, 1906: 297 (*Rhagoneurus*). Eritrea.  
**angularis** MACQUART, 1842: 185 (125) (*Dolichopus*). Senegal; Gambia, Ivory Coast, Nigeria, Gabon, Ethiopia, Uganda, Kenya, Tanzania, Congo (Kinshasa), Zambia, South Africa, Swaziland, Mozambique, Botswana, Namibia.  
 = *metallica* BEZZI, 1908: 380 (*Rhagoneurus*). Congo (Kinshasa).  
 = *violacea* CURRAN, 1926: 398 (*Vaalimyia*). South Africa.  
 = *antennata* VANSCHUYTBROECK, 1951: 50 (*Vaalimyia*). Congo (Kinshasa).  
**angulicornis** GRICHANOV, **spec. nov.** Ivory Coast.  
**clypeata** GRICHANOV, **spec. nov.** Ivory Coast.  
**emelyanovi** GRICHANOV, 1998:228. Cameroon.  
**fractinervis** PARENT, 1929: 175 [1930: 97] (*Vaalimyia*). Benin; Ghana, Nigeria, Congo (Kinshasa), Uganda, Angola, Namibia, Malawi, Ivory Coast.

= *microlepis* PARENT, 1939:274 (*Vaalimyia*). Ghana.  
 = *kivuensis* VANSCHUYTBROECK, 1951: 49 (*Vaalimyia*). Congo (Kinshasa).  
 = *minuta* VANSCHUYTBROECK, 1951: 51 (*Vaalimyia*). Congo (Kinshasa).  
**hilgerae** GRICHANOV, **spec. nov.** Ivory Coast.  
**hollisi** GRICHANOV, 1998:229. Kenya; Congo (Kinshasa).  
**maculata** PARENT, 1936: 322 (*Vaalimyia*). Congo (Kinshasa).  
 = *wittei* VANSCHUYTBROECK, 1951: 46 (*Vaalimyia*). Congo (Kinshasa).  
**minuscula** PARENT, 1934: 134 (*Vaalimyia*). Chad; Tanzania, Ghana.  
**mironovi** GRICHANOV, 1998:226. Ghana.  
**nigrifacies** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**nigrotorquata** PARENT, 1937: 6 (*Vaalimyia*). Congo (Kinshasa).  
**nikolaevae** GRICHANOV, 1998:234. Namibia, Congo (Kinshasa).  
**sukharevae** GRICHANOV, 1998:227. Madagascar, Botswana, Namibia, South Africa, Senegal.  
**tikhonovi** GRICHANOV, 1998:230. Angola.

#### Genus *Ludovicus* RONDANI

**Ludovicus** RONDANI, 1843:43. Type species: *Ludovicus impar* RONDANI, 1843, by monotypy.  
 = *Haltericerus* RONDANI, 1856: 143 (nom. nov. for *Ludovicus* RONDANI, 1843). Type species: *Ludovicus impar* RONDANI, 1843, automatic.  
 = *Nemospathus* BIGOT, 1859: 228. Type species: *Sybistroma dufourii* MACQUART, 1838, by original designation.

**bogoria** GRICHANOV, **spec. nov.** Kenya.

#### Genus *Paracleius* BIGOT

**Paracleius** BIGOT, 1859:215. Type species: *Dolichopus heteroneurus* MACQUART, 1850, by monotypy.  
 = "Paracleius BIGOT", disputable emendation by LOEW, 1864:97.  
 = *Pelastoneurus* LOEW, 1861:36. Type-species: *Pelastoneurus vagans* LOEW, 1861, by designation of COQUILLET, 1910.  
 = *Metapelastoneurus* ALDRICH, 1894:152. Type species: *Metapelastoneurus kansensis* ALDRICH, 1894, by monotypy.  
 = *Leptocorypha* ALDRICH, 1896:315. Type species: *Leptocorypha pavo* ALDRICH, 1850, by monotypy.  
 = *Paracleius* COQUILLET, 1910:583 (as *Paracleius* LOEW). Type-species: *Pelastoneurus arcuatus* LOEW, 1861, by original designation.  
 = *Pseudohercostomus* STACKELBERG, 1931: 776. Type-species: *Pseudohercostomus echinatus* STACKELBERG, 1931, by original designation, **syn.n.**  
 = "Paracleius BIGOT", authors.

= "*Paraclius* LOEW", authors.

**abstrusus** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**aaptus** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**afer** CURRAN, 1926d:9 (*Paraclius*). South Africa; ?Kenya, **comb. nov.**  
**afromaculatus** DYTE & SMITH, 1980:452 (*Paraclius*). Congo; Nigeria, Sierra Leone, **comb. nov.**  
 = *maculatus* PARENT, 1929b:177 (*Paraclius*). Congo. [Junior homonym, preocc. *maculatus* DE MEIJERE, 1916].  
**altimontanus** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**ambiguus** PARENT, 1934a:131 (*Pelastoneurus*). Congo (Kinshasa); Ghana, Ethiopia, **comb. nov.**  
 = *ambiguus* PARENT, 1933b:4 (*Pelastoneurus*). *Nomen nudum*.  
**atricornis** PARENT, 1934a:130 (*Paraclius*). Rhodesia, **comb. nov.**  
**barracoughi** GRICHANOV, **spec. nov.** South Africa.  
**basilewskyi** VANSCHUYTBROECK, 1964a:134 (*Pelastoneurus*). Congo (Kinshasa), **comb. nov.**  
**bequaerti** CURRAN, 1929e:6 (*Paraclius*). Liberia; Congo (Kinshasa), **comb. nov.**  
**biadimbi** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**bissindza** GRICHANOV, **spec. nov.** Congo (Brazzaville).  
**bretoni** GRICHANOV, **spec. nov.** Gabon.  
**brincki** VANSCHUYTBROECK, 1960a:319 (*Pelastoneurus*). South Africa, **comb. nov.**  
**bururi** GRICHANOV, **spec. nov.** Burundi.  
**capensis** PARENT, 1932:230 (*Paraclius*). South Africa, **comb. nov.**  
**caudatus** PARENT, 1934a:131 (*Paraclius*). Kenya, **comb. nov.**  
**collarti** CURRAN, 1927e:93 (*Pelastoneurus*). Congo (Kinshasa); Ghana, Nigeria, **comb. nov.**  
**confusibilis** PARENT, 1937b:3 (*Pelastoneurus*). Congo (Kinshasa); Ivory Coast, South Africa, **comb. nov.**  
 = *benoiti* VANSCHUYTBROECK, 1964a:135 (*Pelastoneurus*). Congo (Kinshasa), **comb. nov.**, **syn. nov.**  
**congoensis** PARENT, 1933b:4 (*Pelastoneurus*). Congo (Kinshasa), **comb. nov.**  
**dedegwa** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**didyensis** GRICHANOV, **spec. nov.** Madagascar.  
**diversifemur** PARENT, 1935a: 121 (*Pelastoneurus*). Congo (Kinshasa); Ghana; Sierra Leone, Cameroon, Equatorial Guinea (Fernando Poo), Central African Republic, Gabon, Ivory Coast, Kenya, Uganda, Angola.  
**diversipes** PARENT, 1934a:132 (*Pelastoneurus*). Sierra Leone, Cameroon, **comb. nov.**  
**dobronosovi** GRICHANOV, **spec. nov.** Cameroon, Congo (Kinshasa).  
**donskoffi** GRICHANOV, **spec. nov.** Cameroon, Gabon.

**echinatus** STACKELBERG, 1931:776 (*Pseudohercostomus*). Indonesia (Yawa); Congo (Kinshasa), ?Madagascar, ?Malawi, **comb. nov.**  
**emasculatus** PARENT, 1937b:3 (*Pelastoneurus*). Congo (Kinshasa); Ivory Coast, St. Helena.  
**fernandopoensis** GRICHANOV, **spec. nov.** Equatorial Guinea (Fernando Poo).  
**funditor** CURRAN, 1926d:10 (*Paraclius*). South Africa, **comb. nov.**  
**gabonensis** GRICHANOV, **spec. nov.** Gabon.  
**gracilis** CURRAN, 1924a:222 (*Pelastoneurus*). South Africa, **comb. nov.**  
**ineditus** PARENT, 1933b:5 (*Pelastoneurus*). Congo (Kinshasa); Central African Republic, **comb. nov.**  
**irinae** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**jasoni** GRICHANOV, **spec. nov.** South Africa.  
**julius** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**kabasha** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**kassebeeri** GRICHANOV, **spec. nov.** Ivory Coast.  
**latipennis** PARENT, 1931:41 (*Paraclius*). Nigeria, **comb. nov.**  
**leidenrothi** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**lippensi** GRICHANOV, **spec. nov.** Congo (Kinshasa), Ivory Coast.  
**machakos** GRICHANOV, **spec. nov.** Kenya.  
**maranguensis** VANSCHUYTBROECK, 1964b:5 (*Paraclius*). Tanzania; Congo (Kinshasa), Uganda, **comb. nov.**  
**martius** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**michaeli** GRICHANOV, **spec. nov.** South Africa.  
**microproctus** PARENT, 1933b:1 (*Paraclius*). Congo (Kinshasa), **comb. nov.**  
**micrurus** PARENT, 1933b:7 (*Pelastoneurus*). Congo (Kinshasa), Uganda, Ethiopia, Cameroon, Malawi, Madagascar, **comb. nov.**  
 = *vadoni* VANSCHUYTBROECK, 1964a:132 (*Paraclius*). Madagascar, **comb. nov.**, **syn. nov.**  
**miripennis** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**miritarsus** GRICHANOV, **spec. nov.** Angola.  
**mottusi** Grichanov, 1999:35 (*Hercostomus*), **comb. nov.** Congo (Kinshasa).  
**naglisi** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**nebulo** PARENT, 1933b:3 (*Paraclius*). Congo (Kinshasa); Ghana, Nigeria, Ethiopia, Tanzania, Zimbabwe, **comb. nov.**  
**neocongoensis** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**ngarukaensis** VANSCHUYTBROECK, 1964b:4 (*Paraclius*). Tanzania; Kenya, South Africa, **comb. nov.**  
**nigeriensis** GRICHANOV, **spec. nov.** Nigeria, Ivory Coast.  
**nigripalpis** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**obscoenus** WIEDEMANN, 1830:651 (*Dolichopus*). South Africa, **comb. nov.**  
**ogojaensis** VANSCHUYTBROECK, 1962c:354 (*Pelastoneurus*). Nigeria, **comb. nov.**  
**olejniceki** GRICHANOV, **spec. nov.** Madagascar, Congo (Kinshasa).

**pectinifer** PARENT, 1934a:133 (*Pelastoneurus*). Uganda; Congo (Kinshasa), Cameroon, Central African Republic, Sudan, **comb. nov.**  
 =*pectinifer* PARENT, 1933b:8 (*Pelastoneurus*). *Nomen nudum*.  
**pedunculatus** PARENT, 1933b:8 (*Pelastoneurus*). Congo (Kinshasa); Malawi, **comb. nov.**  
**pontifex** PARENT, 1937b:4 (*Pelastoneurus*). Congo (Kinshasa), **comb. nov.**  
 =*umbricola* PARENT, 1937:5 (*Pelastoneurus*; male) nec *umbricola* PARENT, 1936a:8.  
**reavelli** GRICHANOV, **spec. nov.** South Africa.  
**sanjensis** GRICHANOV, **spec. nov.** Tanzania.  
**schoutedeni** CURRAN, 1927e:94 (*Pelastoneurus*). Congo (Kinshasa), **comb. nov.**  
**solivagus** LAMB, 1922:386 (*Paraclius*). Seychelles, **comb. nov.**  
**thompsoni** GRICHANOV, **spec. nov.** Burundi, Congo (Kinshasa).  
**umbricola** PARENT, 1936a:8 (*Hercostomus*; female). Congo (Kinshasa), **comb. nov.**  
**umngazi** (female) GRICHANOV, **spec. nov.** South Africa.  
**upembaensis** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**vilkamaai** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**whittingtoni** GRICHANOV, **spec. nov.** South Africa.  
**zamotailovi** GRICHANOV, **spec. nov.** Congo (Kinshasa).  
**zogualensis** GRICHANOV, **spec. nov.** Ivory Coast.  
**zonatus** PARENT, 1931:40 (*Paraclius*). Ghana, Nigeria, **comb. nov.**

### Genus *Polymedon* OSTEN SACKEN

**Polymedon** OSTEN SACKEN, 1877: 317. Type species: *Polymedon flabellifer* OSTEN SACKEN, 1877, by monotypy.  
 =*Macellocerus* MIK, 1878:3. Type species: *Tachytrechus moechus* LOEW, 1861, by original designation.  
 =*Psilischium* BECKER, 1922:93. Type species: *Psilischium laevigatum* BECKER, 1922, by monotypy.  
 =*Katangaia* PARENT, 1933:12. Type species: *Katangaia longifacies* PARENT, 1933 [= *Polymedon octavianus* GRICHANOV], by monotypy, **syn. n.**

**ethiopiensis** GRICHANOV, **spec. nov.** Ethiopia.  
**mulanjensis** GRICHANOV, **spec. nov.** Malawi.  
**octavianus** GRICHANOV, **nom. nov.** Congo (Kinshasa), Tanzania.  
 =*longifacies* PARENT, 1933:12 (*Katangaia*) nec BECKER, 1922: 89, **comb. nov.**

### Genus *Tachytrechus* HALIDAY

=*Ammobates* STANNIUS, 1831:33, 268. Type-species: *Ammobates notatus*

STANNIUS, 1831, by designation of RONDANI (1856:143). [Junior homonym, preocc. *Ammobates* LATREILLE, 1809.]  
 =*Tachytrechus* STANNIUS, 1831:261. *Nomen nudum*.  
**Tachytrechus** HALIDAY in WALKER, 1851a:173 (replacement name for *Ammobates* STANNIUS).  
 =*Stannia* RONDANI, 1857:14 (replacement name for *Ammobates* STANNIUS [as *Hammobates*]).  
 =*Gongrophora* PHILIPPI, 1875:86. Type species: *Gongrophora medinae* PHILIPPI, 1875, by monotypy.

**alternatus** CURRAN, 1924:223. South Africa; Angola, Botswana, Uganda, Nigeria, Ghana.  
**ammoni** GRICHANOV, **spec. nov.** Madagascar.  
**bracteatus** WIEDEMANN, 1830:652 (*Dolichopus*). South Africa; Malawi, Congo (Kinshasa), Kenya, Tanzania, Swaziland.  
 =*muscarius* SPEISER, 1910a:109 (*Hercostomus*), **syn. nov.** Tanzania.  
**brittoni** GRICHANOV, 1998:117. Yemen.  
**consobrinus** HALIDAY in WALKER, 1851:173 (*Dolichopus*). Ireland; Mali, Morocco, Europe.  
**elegans** PARENT, 1933:10. Congo (Kinshasa).  
**imperator** CURRAN, 1927:181. South Africa.  
**insolitus** PARENT, 1931:39. Sierra Leone.  
**kenyensis** PARENT, 1938:409. Kenya; Tanzania, Congo (Kinshasa).  
**luteicoxa** PARENT, 1929:177 [1930:98]. Ivory Coast, Liberia, Ghana, Sierra Leone, Nigeria, Cameroon, Uganda, South Africa.  
 =*liberia* CURRAN, 1929:7. Liberia.  
**melanolepis** BEZZI, 1906:300 (*Hercostomus*). Eritrea; ?Madagascar.  
**petraeus** LOEW, 1871:283. Uzbekistan; 'Africa'.  
**planitarsis** BECKER, 1907:106. Algeria; Ethiopia, Egypt, Saudi Arabia, Turkmenistan.  
**pteropodus** SCHINER, 1868:220. 'Brazil'; South Africa.  
**tessellatus** MACQUART, 1842:185 (125) (*Dolichopus*). Senegal; Gambia, Cape Verde Is., Nigeria, Cameroon, Congo (Kinshasa), Burundi, Tanzania, Kenya, Aldabra, Ethiopia, South Africa, Swaziland, Malawi, Angola, Namibia, Botswana, Mozambique, Madagascar, Mauritius, Seychelles, Socotra; Egypt, Israel; Oriental Region, New Caledonia.  
 =*indirectus* WALKER, 1849:665 (*Dolichopus*; female). 'West Africa'.  
 =*picticornis* BIGOT, 1890b:293 (*Neurigona*). New Caledonia.  
 =*salinarius* BECKER, 1902:63. Egypt.  
 =*seychellensis* LAMB, 1922:389. Seychelles.  
 =*capensis* CURRAN, 1924:223 (female). South Africa.  
 =*ponderosus* FREY, 1958:15 (*Hercostomus*). Cape Verde Is., **syn. nov.**



## REVIEW OF TYPE MATERIAL EXAMINED, DESCRIPTIONS AND NEW RECORDS

### Genus *Argyrochlamys* LAMB

The genus is very close to *Paracleius*, differing in head being distinctly wider than high; face is wide in both sexes, about 2 times wider than height of postpedicel; female oviscapt usually has strong ventral lobes. Frons is high; vein  $M_{1+2}$  is usually distinctly bent in distal part, reaching costa near the tip of wing which has convergent  $R_{4+5}$  and  $M_{1+2}$ ; hind femur bears one true anterior subapical seta; hind coxa has 1 strong external seta; hind basitarsus without setae above. Only 3 species are known so far. Both sexes of the species inhabit sandy sea shores of Africa and beaches of Indian Ocean islands. Specimens of the two new species were taken from crabholes, e.g., from holes of *Ocypode sarafan* in Eritrea.

#### 1. *Argyrochlamys angolensis* GRICHANOV, spec. nov. (Figs. 1-3)

*Holotype*, ♂, [Angola:] Cuanza Riv. Mouth, 4 mi. S. Luanda, Angola, Jan. 1972 / This species in crabholes on beach / Collector B. STUCKENBERG [NMP].

*Paratypes*, 8♂♂, 10♀♀, same labels [NMP, 1♂ & 1♀ in ISNB].

*Description*. Male. All setae on head, body and legs are whitish-yellow. Head 1/5 wider than high. Frons black, epistome black-brown, clypeus light-brown; frons and face densely white pollinose. Frons 1.5 times wider than high. One (usually) or two strong vertical setae bend forward, one (usually) or two shorter postverticals, a pair of strong ocellar setae with two pairs of posterior hairs present. Eyes with rather long hairs. Face glabrous, parallel-sided; 1.5 times higher than wide, slightly wider than height of postpedicel. Clypeus slightly bulging, not reaching lower margin of eyes. Antenna nearly as long as height of head; mostly orange-brownish; scape and pedicel simple, with short setulae; postpedicel brown except base, elongate-triangular, nearly 3 times as long as high, with acute apex and very short hairs; stylus positioned just before apex, practically apical, short, black, with microscopic hairs. Length ratio of scape to pedicel to postpedicel to stylus, 15: 6: 50: 8. Palpus and proboscis small, with short hairs; palpus yellow; proboscis brown.

Thorax mostly black, densely whitish pollinose; scutellum having brownish margin and yellow underside; metaepimeres yellow. 6 strong dorso-central setae with 5<sup>th</sup> seta somewhat shifted towards median axis; 2 rows of acrostichals; 2 strong notopleural, 2 strong humeral, 1 posthumeral setae present. Proepisternum with 1 strong seta above fore coxa and group of hairs.

Scutellum with 2 strong setae and 2 lateral hairs.

Legs entirely yellow; all coxae orange-yellow. Fore coxa with long hairs anteriorly and several setae of the same length at apex; mid coxa with numerous cilia; hind coxa with 1 strong external seta. Fore femur with posteroventral and posterodorsal cilia in basal half and at apex, not longer than diameter of femur. Fore tibia with 2-3 anterodorsal, 2-3 posterodorsal short setae; 5<sup>th</sup> segment of fore tarsus flattened dorsoventrally. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 79: 63: 33: 16: 12: 10: 10. Mid femur with 3 irregular anterior, anteroventral and ventral rows of cilia, slightly shorter or slightly longer than diameter of femur; 1 anterior subapical seta as a linear continuation of anterior row of cilia. Mid tibia with 2 anterodorsal, 3 posterodorsal, 1 dorsal and 3-4 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with short apical setae. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 81: 89: 55: 36: 25: 16: 13. Hind femur with 1 anterodorsal seta at 4/5, several long ventral cilia in basal half and somewhat elongate dorsal setulae. Hind tibia with 2 anterodorsal, 4-6 dorsal, 2 apical setae; subapical dorsal seta is the strongest. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with 1-2 apicoventral setulae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 100: 111: 39: 60: 35: 28: 16.

Wing hyaline, veins yellow. Costa simple.  $R_1$  reaching almost to middle of wing.  $R_{2+3}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 40: 5.  $R_{4+5}$  straight in basal half, curved posteriad in distal half.  $M_{1+2}$  with gentle sinuation in middle of distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 20: 44. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown. Halteres yellow.

Abdomen distinctly flattened dorsoventrally, conoid (dorsal view), weakly whitish pollinose; 1<sup>st</sup>-5<sup>th</sup> segments black in basal half, yellow in distal half; 6<sup>th</sup> segment hardly visible; 7<sup>th</sup> small, yellow, 3/5 length of epandrium; 6-7<sup>th</sup> glabrous; 8<sup>th</sup> yellow, with fine cilia; epandrium large, simple, symmetric, light-brown; hypandrium and epandrial lobes black. Hypandrium bilobate in distal 1/4, aedeagus thick. Distoventral epandrial lobe fused with epandrium, with several setae; 2 epandrial setae. Postgonite slightly longer than surstyli, broad, curved ventrad, narrow at apex, biapiculate. Surstylus curved ventrad, narrow in distal part, with 1 dorsal seta. Cercus fused with epandrium, black, with short but strong simple setae, large, longer than wide, with broad rounded apex.

Female. Similar to male except as noted. Face slightly wider than that in male; ratio of its height to width, 23: 14. Length ratio of scape to pedicel to postpedicel to stylus, 8: 4: 27: 18. 9<sup>th</sup> hemitergite having 3 short thin golden-brownish acanthophorites; basal one rather thinner than apical and subapical.

Length (mm): body 3.0, antenna 0.8, wing 3.1/1.1, hypopygium 1.1.

*Distribution*. Angola.

*Etymology.* The species is named for the country of origin.

*Diagnosis.* The new species is quite distinct in entirely light setation on legs and body, very long postpedicel and very long stylus in both sexes.

## 2. *Argyrochlamys erythreus* GRICHANOV, spec. nov.

(Fig. 4)

*Holotype*, ♀, Erythrea, Museri Id (Dahlak Archipelago), 22.X.1965, Coll. LEWINSOHN Ch. / from holes of *Ocypode sarafan*, I.S.R.S.E. II, 1478 [BMNH].

*Paratype*, ♀, same label [BMNH].

*Description.* Female. All setae on body and legs are black. Head 1/3 wider than high. Frons and face black-brown, densely white pollinose. Frons 1/3 wider than high. One strong black vertical seta bend forward, one shorter yellow postvertical, a pair of strong black ocellar setae present. Eyes with rather long hairs. Face glabrous, parallel-sided; nearly 1.5 times higher than wide, 1.6 times wider than height of postpedicel. Clypeus slightly bulging, nearly reaching lower margin of eyes. Antenna as long as height of head; orange-brownish; scape and pedicel simple, with short setulae; postpedicel elongate-triangular, 1.7 times as long as high, with acute apex and very short hairs; stylus positioned just before apex, practically apical, brown, with microscopic hairs. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> stylomeres), 8: 4: 26: 4: 27. Palpus and proboscis small, brownish, with short cilia; palpus with black cilia; proboscis with light hairs.

Thorax densely grey-whitish pollinose; mesonotum mostly dark, pleura mostly yellow. 6 strong dorsocentral setae with 5<sup>th</sup> seta somewhat shifted towards median axis; 2 rows of acrostichals; 2 strong notopleural, 1 strong humeral, 1 posthumeral setae present. Proepisternum with 1 strong seta above fore coxa and group of hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs yellow, with apical segments of posterior four tarsi slightly darkened; all coxae yellow. Fore coxa with black hairs anteriorly and several setae at apex; mid coxa with numerous cilia; hind coxa with 1 strong external seta. Fore tibia with 2-3 anterodorsal, 2 posterodorsal, 0-1 posterior short setae. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 70: 73: 35: 19: 16: 12: 3. Mid femur with 1 anterior subapical seta. Mid tibia with 2-3 anterodorsal, 2-3 posterodorsal and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with short apical setulae. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 90: 105: 53: 40: 34: 21: 17. Hind femur with 1 anterodorsal seta at 5/6. Hind tibia with 4 anterodorsal, 4 posterodorsal, 3-4 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 110: 132: 32: 58: 45: 30: 20.

Wing hyaline, simple; veins yellow. R<sub>1</sub> reaching nearly 2/5 of wing. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub>

and M<sub>1+2</sub>, 38: 5. R<sub>4+5</sub> straight in basal half, slightly curved posteriad in distal half. M<sub>1+2</sub> with gentle (about 45°) sinuation in middle of distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 23: 56. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow with white cilia. Halteres yellow.

Abdomen depressed of shrinkage, conoid (dorsal view), mostly orange-yellow, weakly whitish pollinose; 5<sup>th</sup> segment mostly grey; 6<sup>th</sup> segment hardly visible. Oviscapt with rather long ventral furci. 9<sup>th</sup> hemitergite having 3 short thin brown acanthophorites. Cerci small, with rather long hairs, as long as cercus.

Male unknown.

Length (mm): body 3.7, antenna 0.8, wing 3.2/1.0.

*Distribution.* Eritrea.

*Etymology.* The species is named for the country of origin.

*Diagnosis.* The new species is close to *A. impudicus*, differing in lighter coloration of body and antenna, rather gentle curvation of M<sub>1+2</sub> in the middle of its distal part, longer postpedicel and practically apical stylus.

## 3. *Argyrochlamys impudicus* LAMB

*Type material examined.* ♂, [Mauritius:] Museum Paris, Ile Maurice, Tamarin Falls, R. CARIÉ, 1914 / Decembre / Type [red label] / *Camptoneura decolor* n.sp. ♂, O. PARENT det. [MNHP].

*Material examined.* 4♂♂, Chagos Archipelago: Diego Garcia: De Moulin, 27.VI.1971 / lagoon coast / A.M. HUTSON, B.M. 1971-346; 1♀, Seychelles Is., Mahe: Beau Vallon, 20.II.1965, Tams and Nye, B.M. 1966-72 [BMNH].

*Diagnosis.* Setation of body and legs mostly black. Apical section of M<sub>1+2</sub> in middle with nearly right-angular curvation; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 17: 35. Female postpedicel as long as high, with distinctly dorsal stylus; stylus not shorter than postpedicel. Hypopygium with long and narrow curved distal epandrial lobe; cercus gradually narrowing apicad.

*Distribution.* Seychelles; Mauritius, Sri Lanka, Chagos Archipelago.

## Genus *Dolichopus* LATREILLE

About 600 almost exclusively Holarctic species are known in this type genus of the family. Six species of *Dolichopus* were included in the *Catalogue of the Diptera of the Afrotropical Region* by DYTE & SMITH (1980), of which 3 species are transferred to other genera and 3 species are excluded from the fauna of Afrotropics in this paper. At the same time, one new species is described here and 3 more species are recorded for the region for the first time.

Records of at least 2 European species (*D. festivus* and *D. sabinus*) need confirmation as they could be mislabelled if not accidentally introduced in the Afrotropical region. *Dolichopus* has many links with *Hercostomus* and *Lichtwardtia*, differing from the first genus in hind basitarsus having 1-3 strong setae above; from the second one in  $M_{1+2}$  being sigmatoid at middle of distal part, rarely with one stublike vein. However, Afrotropical *Hercostomus ultimus* and *H. congoensis* and European *H. (Poecilobothrus) regalis* (MEIGEN) have hind basitarsus bearing 1 or 2 short dorsal setae, whereas wing venation of European *Dolichopus balius* MEUFFELS is quite similar to that in *Lichtwardtia* species. The use of subgenera *Dolichopus*, *Hygroceleuthus* Loew and *Macrodolichopus* Stackelberg of the genus *Dolichopus* is widespread in Eurasian scientific literature (e.g., Negrobov, 1991). Afrotropical species belong to the subgenus *Dolichopus* s.s.

#### 4. *Dolichopus (Dolichopus) aemulus* LOEW, 1859

*Remark.* Three males and one female determined by P. VANSCHUYTBROECK as *D. aemulus* (examined, ISNB) to be from Congo (Kinshasa) belong to *Lichtwardtia* sp. and undescribed species of *Sympycnus* LOEW and should be excluded from the Afrotropical fauna.

*Distribution.* Sweden; Europe.

#### 5. *Dolichopus (Dolichopus) afroungulatus* GRICHANOV, spec. nov. (Figs. 5-8)

*Holotype*, ♂, S. Africa: Natal, #3, Nseleni Nature Res., 28°41'S, 32°03'E, 100 m, Date: 10.I.1994, Natal Musm. Expedition, Forest and margins [NMP].

*Paratypes*, 3♂♂, Ethiopia, Bahar Dar, III.1969, SCHÄUFFELE leg. [SMNS]; 3♀♀, same label with collection dates: XII.1968, I.1969, IV.1969 [SMNS].

*Additional material.* 1 ♀ [damaged], Congo Belge: P.N.A., Rwindi, 1000 m, 26.XI.1934, G.F. DE WITTE: 814 / P. VANSCHUYTBROECK det. 1950, *Hygroceleuthus diadema* HALIDAY [ISNB].

*Description.* Male. General coloration of body metallic blackish-green, with bluish reflection. Frons blue-violet, weakly pollinose; face densely white pollinose. One vertical, one postvertical, a pair of ocellar strong setae present. Lower postocular setae black; ventral postcranium with 2 pairs of black setae. Eyes and face practically bare. Face parallel-sided, with slightly concave epistome and slightly bulging clypeus; ratio of its width to height, 30: 67; clypeus not reaching lower margin of eyes, with straight margin. Antenna mostly yellow-orange; scape and pedicel blackish dorsally; postpedicel mostly black except for basal 1/2 (lateral view) or 1/3 (inner view). Scape simple, flattened laterally, triangular, densely haired dorsally; postpedicel securiform, 1.5 times as

long as high, with acute-angular apex and microscopic hairs; stylus arising just before middle of dorsal side, black, pubescent, with hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 16: 9: 25: 74. Palpus and proboscis very small, with short hairs; palpus yellow, with 1 black seta; proboscis black.

Thorax grey pollinose; mesonotum black-violet; posterior notopleural depression mat-black; pleura bronze-bluish-green. 6 dorsocentral setae, 2 rows of acrostichals. Proepisternum with 1 strong black seta and light hairs above coxa, group of upper light hairs. Scutellum with 2 strong setae, 2 lateral and 2 pairs of microscopic inner marginal hairs.

Legs mostly yellow; fore coxa reddish-yellow; mid and hind coxae mostly brown-black; all coxae grey pollinose; hind femur reddish dorsally; hind tibia brownish-yellow, black at apex; fore tarsus black from tip of basitarsus; 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each blackish at apex; 5<sup>th</sup> segment of the same tarsus black; hind tarsus black. Fore coxa with black hairs and several apical setae. Fore femur bare. Fore tibia with 3 anterodorsal, 1 posterodorsal, 1 strong and 1 short posteroventral, 4 short apical setae. Fore tarsus simple. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 112: 105: 57: 25: 18: 14: 15. Mid femur with 1 anterior, 1 strong and 1 short posteroventral subapical seta. Mid tibia with 4 anterodorsal, 2 posterodorsal, 2 anteroventral and 5 apical setae. 2<sup>nd</sup>-4<sup>th</sup> segments of mid tarsus flattened laterally; 5<sup>th</sup> segment flattened dorsoventrally, with anterior and posterior rows of 6 flattened black setae, as long as width of tarsomere. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 140: 149: 70: 33: 27: 20: 28. Hind femur with anterodorsal row of 4-7 subapical setae. Hind tibia with 3-4 anterodorsal, 3-4 posterodorsal, 3-4 ventral, 3 apical setae. Hind basitarsus with 1 short apicoventral, 1 basoventral seta, 1.5 times longer than diameter of tarsomere, 1 middorsal seta of the same length. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 145: 185: 26: 19: 14: 12.

Wing practically hyaline in posterior half, infumated in anterior half and along crossvein *m-cu*. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 35: 20.  $M_{1+2}$  in distal part with double right-angular flexion at 1/3 and rudiment of  $M_2$ , then parallel to  $R_{4+5}$ , joining costal vein just before wing apex. Distal part of  $M_{1+2}$  as long as proximal part. Crossvein *m-cu* straight, oblique; ratio of *m-cu* to distal part of  $CuA_1$ , 39: 45. Anal vein distinct, almost reaching to wing margin; anal angle obtuse. Lower calypter yellow, with black cilia. Halteres yellow-orange.

Abdomen olive-blackish, whitish pollinose, with narrow black bands along sutures, black hairs and marginal setae. 7<sup>th</sup> segment nearly as long as epandrium, bare; 8<sup>th</sup> segment black, with fine sparse black hairs. Epandrium black, nearly as long as 4<sup>th</sup> and 5<sup>th</sup> tergites combined, with yellow appendages. Hypandrium asymmetric. Epandrial lobe prominent, with two apical setae. Two pairs of surstylus, covered with fine and thick setae as figured. Cercus mostly

yellow, with long black apical process and long simple black setae along dorsal margin of cercus.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: postpedicel slightly longer than high (20: 17); ratio of width to height of face, 33: 71.

Length (mm): body 5.0, antenna 1.35, wing 4.6/1.5, hypopygium (including cercal setae) 2.25.

*Distribution.* South Africa, Ethiopia, ?Congo (Kinshasa).

*Diagnosis.* The species keys out (PARENT, 1938) to Palearctic *D. ungulatus* LINNAEUS, 1758, differing from the latter species in stublike vein  $M_2$ , flattened segments of mid tarsus, long distal process on cercus and many other characters.

### 6. *Dolichopus (Macrodolichopus) diadema* HALIDAY, 1832

*Remark.* *D. diadema* determined by P. VANSCHUYTBROECK (2 females examined, RMCA) to be from Congo (Kinshasa) belongs to indeterminable species of *Lichtwardtia* and should be excluded from the fauna of the Afro-tropical region. One damaged female from the National Park Albert (Rwinda, 1000 m) may belong to *D. (D.) afroungulatus* spec. nov.

*Distribution.* Ireland; Europe, Kazakhstan, Palearctic China.

### 7. *Dolichopus (Dolichopus) festivus* HALIDAY

*Material examined.* 1♂, [Ivory Coast:] Coll. Mus. Tervuren, Côte d'Ivoire: Akoupe, 25 km N d'Abidjan, J. DECELLE, VIII, 1961 / P. VANSCHUYTBROECK Det. 19?? *Dolichopus festivus* HAL. [RMCA].

*Diagnosis.* The species is very close to Palearctic *D. trivialis* HALIDAY. Femora yellow; lower postocular setae light;  $M_{1+2}$  without rudiment of  $M_2$ ; hind femur with long yellow cilia; apicoventral seta on fore tibia undeveloped; 2<sup>nd</sup>-4<sup>th</sup> segments of fore tarsus straight, covered with short erect hairs; 1<sup>st</sup>-2<sup>nd</sup> segments of fore tarsus each having apicoventral setae. The specimen (if not mislabelled) was most likely accidentally introduced in the Afrotropical region.

*Distribution.* Europe; Ivory Coast.

### 8. *Dolichopus (Dolichopus) flavocrinitus* BECKER

(Fig. 9)

*Material examined.* ♂, Senegal, M'Bour, St. ORSTOM, 11-17.XII.1980, B. SIGWALT leg. / Piège de Malaise [MNHP].

*Description.* Male. General coloration of body metallic dark-green. Frons weakly pollinose; face white pollinose. One vertical, one postvertical, a pair of ocellar strong setae present. Lower postocular setae white; ventral postcranium

with several black setae. Eyes and face practically bare. Face narrowed towards clypeus; ratio of its width below antennae to width at clypeus to height, 17: 7: 35; clypeus not reaching lower margin of eyes, with straight margin. Antenna mostly yellow; postpedicel black in apical half, subtriangular, as long as high, with right-angular apex and microscopic hairs; stylus middorsal, black. Palpus and proboscis very small, with short hairs; palpus yellow, with 1 black seta; proboscis brown.

Thorax grey pollinose. 6 dorsocentral setae, 2 rows of short acrostichals. Proepisternum with 1 strong black seta and light hairs above coxa, several upper light hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow; mid and hind coxae mostly brown-black; at least first two segments of fore tarsus yellow, each with brownish distal apex; first two segments of mid and hind tarsi yellow, each with blackish distal apex; 3<sup>rd</sup>-4<sup>th</sup> segments of same tarsi mostly black, yellow-brownish at base; 5<sup>th</sup> segment black. Fore coxa with black hairs and several apical setae. Fore femur bare. Fore tibia with 2 very short anterodorsal, 1 strong and 1 short posterodorsal, 1 short posterior, 2 apical and 1 long apicoventral setae. Fore tarsus simple. Length ratio of fore femur to tibia to tarsus (segments first and second), 60: 60: 28: 12. Mid femur with 1 subapical anterior seta. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 anteroventral and 5 apical setae. Mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 77: 80: 42: 20: 16: 12: 11. Hind femur with about 20 long yellow posterodorsal, posterior and posteroventral cilia, at most 3/5 length of femur, in addition to subapical anterior seta at 3/4. Hind tibia with small posterodorsal swelling densely covered with microsetulae, 4 anterodorsal, 5 dorsal, several short ventral, 1 apical setae. Hind basitarsus with 1 short apicoventral, 3-4 short ventral, 1 strong middorsal setae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 75: 90: 30: 32: 20: 14: 12.

Wing practically hyaline, without distinct spots. Costal vein with elongate thickening at  $R_1$ .  $R_1$  1/3 length of wing.  $R_{2+3}$  and  $R_{4+5}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 24: 18.  $M_{1+2}$  in distal part with gentle flexion at 2/5, then parallel to  $R_{4+5}$ , joining costal vein at wing apex. Distal part of  $M_{1+2}$  1.5 times longer than proximal part. Crossvein *m-cu* straight, oblique, half as long as apical part of  $CuA_1$ . Anal vein distinct, nearly reaching to wing margin; anal angle right. Lower calypter yellow, with white cilia. Halteres yellow.

Abdomen metallic dark-green, whitish pollinose, with narrow black bands along sutures, black hairs and marginal setae; 2<sup>nd</sup>-3<sup>rd</sup> tergites laterally and sternites mat-black-brown. 8<sup>th</sup> segment black-green, with short sparse black hairs. Epandrium greenish-black, asymmetric, as long as 4<sup>th</sup> and 5<sup>th</sup> tergites combined, with yellow appendages. Hypandrium simple. Epandrial lobes prominent, with three setae. Two pairs of surstylus, covered with fine and thick setae as figured. Unpaired distal epandrial lobe very narrow. Cercus white, with

narrow black limb along distal margin, rounded, excised along distal margin, with curved black setae on distal margin of cercus.

Length (mm): body 2.8, wing 2.8/0.9, hypopygium 1.2.

*Distribution.* Egypt; Turkmenistan; Senegal (!).

*Diagnosis.* The species keys out to *D. jaxarticus* STACKELBERG, 1927, differing from the latter in practically simple hind tibia. *D. flavocrinitus* is closely related to *D. signifer* HALIDAY, 1832, differing in black cilia on hind femur and lower calypter. Epandrium asymmetric, with strong projection between hypandrium and epandrial lobe on left side; the projection is absent on right side. Cercus rounded-oval, with strongly incised distal margin. The specimen from Senegal has probably somewhat darker tarsi than Egyptian ("tarsal segments yellow, each with black apex"; BECKER, 1902) and Turkmenian material ("tarsi entirely yellow"; PARENT, 1932).

### 9. *Dolichopus (Dolichopus) sabinus* HALIDAY

*Material examined.* 1♂, Tanzania, Kimboza Forest Reserve / 11.IX.1977, leg. MAHUNKA [HNHM].

*Diagnosis.* The species is close to *D. callosus* BECKER. Femora yellow; basal half of hind basitarsus yellow; mid tibia with 1 anteroventral seta; tarsi simple; hind femur without long cilia; fore tibia with long apicoventral seta; lower postocular setae light; lower calypter with black cilia; face white; antennae partly yellow; hypopygium black. The species was most likely accidentally introduced (if not mislabelled) in the Afrotropical region.

*Distribution.* Ireland; Europe; Tanzania (!).

### 10. *Dolichopus (Dolichopus) signifer* HALIDAY, 1838

*Remark.* Treating Afrotropical material identified by VANSCHUYTBROECK and deposited in RMCA, ISNB and MNHP, I have not located this species. Nevertheless, I believe that the species is absent in the Afrotropical fauna, as I have found a huge number of mistakes and misidentifications made by the author. See also diagnosis of *D. flavocrinitus*.

*Distribution.* Europe, North Africa (Morocco, Azores), Transcaucasia, Central Asia.

### Genus *Hercostomus* LOEW

The world fauna of the genus *Hercostomus* s.l. (including *Hercostomus* s.s., *Gymnopternus*, *Poecilobothrus* and *Platyopsis*) numbers about 570 mostly Holarctic species. The Afrotropical region has 47 (including new) species, of which about half occur in central part of Tropical Africa.

The Afrotropical species of *Hercostomus* differ from the related genera of

the subfamily Dolichopodinae in the complex of characters such as follows: one strong anterior subapical seta is present on the middle and hind femora; the face is narrow and narrowed towards palpi; metapleuron and posterior mesoscutum are bare; scutellum usually has two stout bristles and two marginal hairs; wing vein  $M_{1+2}$  is straight or inconspicuously sinuate in basal 1/3 of distal part, usually joining costal vein just before wing tip;  $R_{4+5}$  and  $M_{1+2}$  are weakly convergent in distal part; postpedicel asymmetric, with blunt or pointed apex; stylus is short pubescent. *Gymnopternus* is treated as valid genus by Nearctic Dolichopodid workers, but it is treated as subgenus by European and Asian workers. According to key to subgenera of the genus (GRICHANOV, 1997), all Afrotropical species belong to the subgenus *Hercostomus* s.s., although some species has parallel or inconspicuously convergent  $R_{4+5}$  and  $M_{1+2}$  wing veins, and at least three species (*H. afer*, *H. blagoderovi* and *H. dimidiatus*) have scutellum haired dorsally.

Three species groups could be discussed for Afrotropical *Hercostomus*.

I. *afer* (RONDANI), *argyropus argyropus* (LOEW), *argyropus par* PARENT, *blagoderovi* GRICHANOV, *caprivi* GRICHANOV, *congoensis* (CURRAN), *dimidiatus* CURRAN, *eronis* CURRAN, *golubtsovi* GRICHANOV, *jani* DYTE, *rhodesiensis* PARENT, *straeleni* VANSCHUYTBROECK, *ultimus* PARENT.

Fore tibia usually with 1 long apicoventral seta. Fore tarsus simple. Three apical segments of hind tarsus usually shortened, flattened and slightly widened; 1, 2 or 3 apical segments of the same tarsus usually silvery pilose on one side; 5<sup>th</sup> segment of mid tarsus often silvery pilose. Hypandrium fused to epandrium except apex. Surstylus bilobate. Cercus flat, broad, usually simple, with ring of marginal setae or hairs of different length.

II. *balensis* GRICHANOV, *enghoffi* GRICHANOV, *freidbergi* GRICHANOV, *infirmus* PARENT, *kefaensis* GRICHANOV, *krivosheinae* GRICHANOV, *mostovskii* GRICHANOV, *nectarophagus* CURRAN, *ngozi* GRICHANOV, *ozeroi* GRICHANOV, *patellitarsis* (PARENT), *perturbus* CURRAN, *scotti* GRICHANOV, *selikhovkini* GRICHANOV, *tobiasi* GRICHANOV, *wittei* GRICHANOV, *yakovlevi* GRICHANOV.

Fore tibia with short apical setae. 3<sup>rd</sup> segment of fore tarsus usually compressed and widened, with more or less elongate setulae dorsally; 1 or 2 apical segments of the same tarsus shortened or somewhat modified, often white pilose dorsally. Mid and hind tarsi simple. Hypandrium usually midventral, with short basal part and several pairs of entangled lobes. Surstylus bilobate, often modified. Postgonite usually widely bifurcated, with long dorsal arm projecting distally and short ventral arm projecting apicoventrally. Cercus usually narrow, with basolateral prominence, process or large basoventral lobe bearing strong setae.

III. *duviardi* COUTURIER, *garambensis* GRICHANOV, *itineris* GRICHANOV, *krivokhatskii* GRICHANOV, *laanmae* GRICHANOV, *lictor* PARENT, *minimixtus* DYTE et SMITH, *ovchinnikovae* GRICHANOV, *panteleevae* GRICHANOV, *pseudolictor* GRICHANOV, *rezniki* GRICHANOV, *strictilamellatus*

PARENT, *transitorius* PARENT.

Legs usually simple, sometimes (*H. strictilamellatus*) fore tibia and apical segments of fore tarsus slightly swollen; legs mostly yellow, hind femur blackish or brown at least in apical half; middle and hind tibiae without strong ventral setae;  $R_{4+5}$  and  $M_{1+2}$  parallel or slightly converging in distal part; male postpedicel usually securiform, with basodorsal stylus; stylus distinctly pubescent; male cercus narrow, often ornamented with processes or bunches of long cilia. The group is likely to be separated in independent subgenus of the genus *Hercostomus*, sharing some features with the subgenera *Poecilobothrus*, *Gymnopternus* and *Hercostomus* s.s.

Ungrouped species: *intercedens* GRICHANOV, *scharffi* GRICHANOV, *turneri* GRICHANOV.

Lower postocular setae black; legs simple; wing and hypopygium morphology various.

### 11. *Hercostomus afer* (RONDANI)

(Figs. 10-12)

*Material examined.* 5♂♂, Ethiopia, Bahor Dar, III.1969, Juni/Juli 1969, SCHÄUFFELE leg.; 1♀, Ethiopia, Bahor Dar, 1.11.1969, K.W. u. H. HARDE leg.; 1♀, Äthiopia, Bahor Dar, (Licht), 15-25.10.1967, H. SCHÜZ leg. [SMFD]; 1♂, Ethiopia, Gamo Gofa, Chenchä, 40 km NW, Arba Minch, 2800 m, 6.II.2000, I. YAROM & A. FREIDBERG [TAU].

*Description.* Male. Frons bluish-black, slightly grey pollinose; face densely silvery-white pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Upper postocular setae black; lateral and lower postocular setae white. Eyes with short hairs; face glabrous. Face gradually narrowed towards palpi, face in middle narrower than height of postpedicel; clypeus not reaching lower margin of eyes. Antenna as long as height of head, entirely black; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel asymmetric, ovoid apicodorsally, as long as high, glabrous; stylus positioned just before middle of dorsal side, black, pubescent, with hairs shorter than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 12: 9: 15: 70. Palpus and proboscis moderately small, brown, with short hairs; palpus with 1 short black seta.

Thorax mostly bluish-olive-green with weak metallic reflection; mesonotum blackish, grey pollinose; pleura white pollinose. 6 strong dorsocentral setae; 2 rows of acrostichals; 2 strong notopleural, 1 strong and 2 fine humeral, 1 posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and numerous dorsal and marginal short hairs.

Legs mostly yellow; fore coxa yellow, middle and hind coxae black ex-

cept for yellow apex; fore and mid tarsi black from tip of basitarsus; hind femur black at extreme apex; hind tibia brownish with black apex; hind tarsus mostly black; 3<sup>rd</sup>-5<sup>th</sup> segments of hind tarsus silvery-white anteriorly. Fore coxa with short black hairs anteriorly and several black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 strong external setae. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 1 posterior, 2 apical setae and 1 long apicoventral cilia reaching half length of basitarsus. 3-5<sup>th</sup> segments of fore tarsus with ventral pad of microscopic light erect hairs. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 127: 126: 74: 26: 18: 12: 13. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 anteroventral and 5 apical setae. 1<sup>st</sup>-2<sup>nd</sup> segments of mid tarsus each with several very short ventral setae. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 150: 198: 119: 35: 24: 20: 19. Hind femur with one subapical anterodorsal seta. Hind tibia with 3 anterodorsal, 4 posterodorsal, 5 fine ventral, 3 apical setae. Hind basitarsus with 3 short ventral and 1-2 short apical setae; 2<sup>nd</sup> tarsomere with elongate setulae; 3<sup>rd</sup>-5<sup>th</sup> segments slightly widened, flattened and silvery-white pilose posterodorsally, with short setulae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 185: 240: 104: 80: 43: 36: 29.

Wing greyish, almost hyaline, veins brown. Costa simple.  $R_1$  reaching to first third of wing length.  $R_{2+3}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 45: 13.  $R_{4+5}$  and  $M_{1+2}$  weakly but distinctly convergent.  $M_{1+2}$  joining costa at wing apex. Crossvein *m-cu* almost straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 30: 30. Posterior wing margin evenly convex, almost straight in middle half. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres dirty-yellow.

Abdomen mostly olive-green, whitish pollinose, black along sutures; 6<sup>th</sup>-7<sup>th</sup> segments black, bare; hypopygium black. 8<sup>th</sup> segment with numerous fine black cilia. Epandrium large, strongly projected distoventrally. Hypandrium fused with epandrium except apex, simple. Aedeagus thin, concealed. Distoventral epandrial lobe fused with epandrium; 2 epandrial setae at base of hypandrium. Postgonite nearly as long as surstyli, curved ventrad, trilobate at apex, with lateral lobes bearing comb of microscopic setulae. Surstylus yellow, curved, with 2 lobes, which swollen at base, pointed at apex; ventral lobe with 1 apical and 1 subapical setae and several weak setulae; dorsal lobe of surstylus with 1 strong dorsal seta at base. Cercus yellow, with narrow black limb along distal margin, light hairs dorsally and ventrally; distal margin of cercus incised at apex, with several black falcate setae at apex and numerous curved cilia; cercus large, as long as wide, with drawn-out distodorsal apex and acute basoventral apex.

Length (mm): body without antennae 5.0, antenna 1.1, wing 6.0/1.3, hy-

popygium 1.7.

*Distribution.* Ethiopia.

*Diagnosis.* Antenna entirely black; apical segments of mid tarsus entirely black, simple; hind femur with black spot at apex; hind tibia brown with black apex; hind basitarsus black, without dorsal setae; 2<sup>nd</sup> segment of hind tarsi with elongate setulae; 3<sup>rd</sup>-5<sup>th</sup> segments slightly widened, flattened and silvery-white pilose posterodorsally, with short setulae dorsally; cercus regularly triangular, large, with several falcate setae at distodorsal apex and strong dorsal subapical seta.

## 12. *Hercostomus argyropus argyropus* (LOEW)

*Type material examined.* Lectotype: ♂, R / 183 / 151 / *Gymnopternus argyropus* ♂; Paralectotypes: 1♂, 187 / 152 / *Gymnopternus argyropus* ♂; 1♀, R / 186 / 153 / *Gymnopternus argyropus* ♀; 1♀, R [no other labels] [NHRS].

*Material examined.* 1 ♂, South Africa, Natal, Oribi Gorge N. Res., 10.X.83, A. FREIDBERG [TAU]; 3♂♂, 6♀♀, S. Africa, Natal, #5G, Fernecliffe N. R., 29°33' S, 30°20' E, Date: 12.12.1993, Coll. C.R. CRADOCK; S. Africa: Natal, #24, Pietermaritzburg, 29°36' S, 30°21' E, 700 m, 22.IV.1992, Stream-side vegetation, Botanical Gardens, A. WHITTINGTON; S. Africa: Natal, #23, Midlands Howick, 29°29' S, 30°13' E, 1060 m, Date 17.IV.1992, Stream-side vegetation, Coll.: A.E. WHITTINGTON; Woodb. Vill., IV.1915, C.J. SWIERSTRA / Collection Transvaal Museum; 1♀, South Africa: Natal Prov., Karkloof Range, Nr. Mt. Alida, temp. forest assoc., 17 June 1974, near pond, ME IRWIN (2930Ab); 2♀♀, South Africa, Natal, Pietermaritzburg, Town Bush, M.E. IRWIN, 5.XI.1972 (2930Cb); 3♀♀, Botswana: Xugana Island, 19°04' S, 23°03' E, 22-26.XI.1979, Lamoral ex Malaise Trap [NMP]; 1♀, S. Afr., Cape Prov., Bloukrans River, 20 mls ENE Plettenbergbaai, 11. I.1951, No. 133 / Swedish South Africa Expedition 1950-1951, BRINCK-RUDEBECK / P. VANSCHUYTBROECK det. 1958, *Tachytrechus consobrinus* WALKER [MZLU]; 1♂, 2♀♀, Republic of South Africa, Cape Province, 10 km S of Citrusdal, Kornlandskloof, Malaise trap (S32°40', E19°02'), 5-9.X.1994, Malaise trap, marshy meadow at riverside; Bloukrans Pas, at Varkrivier, (S33°57', E23°38'), Malaise trap, Coastal rainforest in ravine, 14-19.X.1994; leg. Michael SÖDERLUND [NHRS]; 1♂, Cap. B., Spei. / Victorin. / 109 / 784; 1♀, Cap. B., Spei. / Victorin. / 110 / 790; 4♀♀, R / Caffraria / J. Wahlb. [2♀♀ with Nos. 185 & 186] [NHRS].

*Diagnosis.* The following complex of characters could distinguish *H. a. argyropus*. Hind basitarsus without dorsal setae; 3<sup>rd</sup>-5<sup>th</sup> segments of hind tarsus with short setulae, slightly longer than 2<sup>nd</sup> segment, flattened and silvery pilose dorsally; mid tarsus with simple setae; 5<sup>th</sup> segment of mid tarsus silvery pilose dorsally; fore tarsus having fine brilliant pubescence posteriorly, which as long as 5<sup>th</sup> tarsomere; cercus yellow, small, with rounded distodorsal and basoventral

apices and several falcate setae at distal margin.

*Distribution.* South Africa; Zimbabwe, Namibia, Botswana (!).

## 13. *Hercostomus argyropus par* (PARENT)

*Type material examined.* Holotype, ♂ [red label], Congo belge: P.N.A. Kitondo (pres Ganjo), 2000 m, 7 au 23.I.1935, G.F. DE WITTE: 1033 / Coll. Mus. Congo (ex coll. I.P.N.C.B.) / *Hercostomus pulchripes* n.sp. [RMCA]; paratypes differing in the first label as follows: 1 ♂, Congo belge: Ruanda lega (pied Volc. Karisimbi), 2400 m, 12-III-1935, G.F. DE WITTE: 1314; 1 ♂ Congo belge: P.N.A. Kitondo (pres Ganjo), 2000 m, 7 au 23.I.1935, G.F. DE WITTE: 1033; 4 ♂♂, Congo belge: Kivu, Rutshuru (riv. Rodahira), 1200 m, 1.VII.1935, G.F. DE WITTE: 1680; ♂, paratypus [red label] / Coll. Mus. Congo, Urundi Bururi, 1949, F. FRANÇOIS / *Hercostomus bururiensis* VANSCHUYTBROECK (in coll.; *Nomen nudum*) [my hand] / *Hercostomus pulchripes* VANSCHUYTBROECK dt. GRICHANOV, 1998 [RMCA].

*Material examined.* 1 ♂, 1 ♀, Kenya, Mt. Elgon Lodge, 1-6.XI.83, I. YAROM; 1 ♀, Kenya, Kericho, 16.XI.1986, I. SUSMAN; 2 ♂♂, 1 ♀, Kenya, Kericho, 2000 m, 20.XII.1995, I. YAROM & A. FREIDBERG; 1♂, Uganda, S.W. Kabale-Ketuna Rd, 1900 m, 23.XII.1995, I. YAROM & A. FREIDBERG; 1♂, Tanzania, Njombe, 10 km SE Rt B4, 2000 m, 27-28.VII.1996, A. FREIDBERG. [TAU]; 1 ♂, 5 ♀, Malawi, SE1535AD, Zomba Plat., S slope, Kuchere Rest House, 14.III.1987, JGH & A LONDT, Malaise trap; [NMP]; 22 ♂♂, 18 ♀♀, Urundi: Bururi [Kumuyunge; Mugamba; Makamba; Shimabura], alt. 1950 m, III.1948 [2050 m, 19.V.1948; 1450 m, 23.V.1948; 1950 m, 8.I.1948; 1950 m, 8.I.1949; 1900 m, 4.III.1953; 1950 m, VI.1953; 2000 m, V.1948; 1950 m, 3.V.1948; 1950 m, 13.III.1948; 2000 m, 10.X.1948; 2000 m, 4.XII.1949; 2100 m, 11.VIII.1948; 2050 m, 12.V.1948; 1950 m, IV.1948; 1950 m, 20.II.1948], F. FRANÇOIS / R.I.Sc.N.B. I.G. 24452 [ISNB]; 1♂, 1♀, Coll. Mus. Tervuren, Kivu: Butembo, IX/X.1965, Rév. P. CÉLIS; 1♂, Coll. Mus. Congo, Kivu: Terr. Lubero, Mulo, 1960 m, VI/VII.1953, R.P.M.J. CÉLIS; 1♂, 1♀, Coll. Mus. Congo, Kivu: Butembo, 2000 m, 19.XII.1952, P. BASILEWSKY; 1 ♀, Coll. Mus. Congo, Kivu: Terr. Lubero, Mulo, 1950 m (b. marals), IV.1953, R.P.M. CÉLIS; 1♀, Coll. Mus. Congo, Ruanda: Astrida, 20.III.1939, A. LESTRADE; 1♀, Coll. Mus. Congo, Kivu: contr. S Kahuzi, km. 27, 2200 m, 28.III.1953, P. BASILEWSKY; 3♀♀, Congo Belge, P.N.U., Lusinga (1760 m), 1-8.XII.1947, 22.IV.1949, G.F. DE WITTE: 1132a, 2547a; 1♀, Congo Belge, P.N.U., Mukana (1810 m), 22-23.IV.1949, G.F. DE WITTE: 2250a; 1♀, Coll. Mus. Congo, Urundi: Bururi, 1800-2000 m, 5/12.III.1953, P. BASILEWSKY; 1♀, Coll. Mus. Congo, Ruanda: Kinazi, 1600 m, terr. Nyanza, P. BASILEWSKY, 5/8.I.1953; 3♀♀, Coll. Mus. Congo, N. Lac Kivu: Rwankwi, V.1948, J.V. LEROY; 1♀, Coll. Mus. Congo, Kamogobe (Sud Masisi), 4.III.1936, L. LIPPENS (48-49); 2 ♀, Coll. Mus. Congo, Ruanda: Gîte de Nkuli, 17.III.1936, L. LIPPENS (26, 28)

[RMCA]; 5♂♀, Kenya, Taita Hills, Chawia forest (col. 11), Mbololo forest (coll. 6), 21.VI, 25.VI.1999, DE MEYER [RMCA]; 3♂♂, 7♀♀, Tanganyika: Mt. Meru, 1800 m, 1.VII.1962, leg. G. HEINRICH [NHRS]; 1♀, Tanganyika: Rungve Mt., 2600 m, 20 mi. SSE Mvoya, leg. G. HEINRICH, 1962 [NHRS].

**Diagnosis.** *H. argyropus par* is similar to *H. a. argyropus* in almost all respects (including morphology of hypopygium), differing from nominotypic subspecies in having only two apical segments of hind tarsus flattened and silvery; 3<sup>rd</sup> segment of the same tarsus not flattened, silvery white in distal half only. Sometimes only the last segment flattened, whereas 4<sup>th</sup> tarsomere simple, weakly silvery shimmering.

**Distribution.** Kenya; Tanzania, Congo (Kinshasa), Uganda, Burundi, Angola, Namibia, Botswana, Rwanda (!), Malawi (!).

#### 14. *Hercostomus balensis* GRICHANOV, spec. nov.

(Figs. 13-15)

**Holotype**, ♂, Ethiopia: Bale, Adaba, 12 km E, River, 30.I.2000, A. FREIDBERG & I. YAROM [TAU].

**Description.** Male. Frons and face black, densely white pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae black. Eyes with short hairs; face glabrous. Face gradually narrowed towards palpi, narrower than height of postpedicel; clypeus not reaching lower margin of eyes. Antenna as long as height of head, black; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel asymmetric, straight dorsally, convex apicoventrally, acute apicodorsally, slightly longer than high, microscopically haired; stylus positioned just before middle of dorsal side, black, pubescent, with short hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 11: 6: 15: 47. Palpus and proboscis moderately small, yellow, with short hairs; palpus with 1 short black seta.

Thorax green-black with weak metallic reflection, metaepimeron brownish; mesonotum anteriorly and pleura whitish pollinose. 6 strong dorso-central setae; 2 rows of acrostichals; 2 strong notopleural, 1 strong and 1 fine humeral, 1 posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum having 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid and hind coxae darkened, hind femur black at extreme apex; hind tibia brownish; 5<sup>th</sup> segment of fore tarsus brown; fore and mid tarsi black from tip of basitarsus, hind tarsus entirely black. Fore coxa with short dark hairs anteriorly and several setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 strong external setae. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2-3 apical very short setae. 3<sup>rd</sup> segment of fore tarsus flattened and

strongly widened, with dorsal comb of short black setulae; 4<sup>th</sup> and 5<sup>th</sup> segments with fringe of white erect dorsal hairs, 1.5-2 times longer than diameter of tarsomeres. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 90: 99: 54: 55: 39: 10: 10. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal and 4 apical setae. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 106: 162: 90: 47: 40: 19: 14. Hind femur with one subapical anterodorsal seta at 3/4. Hind tibia with 3 anterodorsal, 4 posterodorsal, 5 fine ventral, 3 apical setae and short posteroventral apical denticle. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 130: 190: 55: 64: 35: 22: 14.

Wing greyish, veins black. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 34: 10. R<sub>4+5</sub> and M<sub>1+2</sub> distinctly convergent. M<sub>1+2</sub> joining costa just before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 25: 42. Anal vein fold-like; anal lobe narrow, having broad and deep emargination, slightly projected posteriad at apex of anal vein; anal angle absent. Lower calypter yellow, with black cilia. Halteres yellow.

Abdomen covered with black hairs and marginal setae, mostly black, with 2<sup>nd</sup> and 3<sup>rd</sup> segments broadly reddish-yellow laterally, 7<sup>th</sup> segment brown, slightly longer than epandrium; 8<sup>th</sup> segment yellow, with fine black cilia. Hypopygium reddish yellow with yellow appendages, weakly pollinose. Epandrium elongate-oval, twice longer than high. Foramen left midlateral. Hypandrium midventral, swollen at base; about 5 entangled lobes of different length and width. Aedeagus thin, projected. Epandrial lobe undeveloped; 1 short and 1 very long apicoventral epandrial setae. Surstylus bilobate; ventral lobe thin, slightly shorter than dorsal lobe, with 1 very short apical seta; dorsal lobe of surstylus wider than ventral lobe, with 1 strong middorsal seta. Postgonite widely bifurcated; dorsal arm longer than surstylus, narrow at apex; ventral arm short and thick, projecting apicoventrally, having broad right tooth. Cercus yellow, with light cilia; cercus densely covered with hairs longer than cercus width; several strong ventral setae in distal part; 3 strong setae raising from apex of long process at middle; basoventral lobe nearly 1/2 as long as cercus, with bunch of about 7 long apical setae; the setae nearly as long as cercus.

Female unknown.

Length (mm): body 3.6, antenna 0.9, wing 3.7/1.2, hypopygium 0.9.

**Distribution.** Ethiopia.

**Etymology.** The species is named for the country (province) of origin.

**Diagnosis.** Having wing anal lobe with broad and deep postero-proximal emargination, the new species is close to *H. kefaensis*, differing in postpedicel being slightly longer than high and 4-5<sup>th</sup> segments of fore tarsus having a fringe of white erect cilia. Cercus has a large fungaceous basolateral process of moderate size, 1/2 the length of cercus, with about 7 long setae.



### 15. *Hercostomus blagoderovi* GRICHANOV

*Material examined.* 1♂, Kenya, Kakamega Forest, 8-9.XI.1983, I. YAROM [TAU].

*Diagnosis.* The species is related to *H. eronis*, differing in shape of cercus and mostly black apical segments of hind tarsus. Hind basitarsus without dorsal setae. Three apical segments of hind tarsus flattened and silvery white dorsally, with short setulae. 2<sup>nd</sup> segment of hind tarsus shorter than 3<sup>rd</sup>-5<sup>th</sup> combined. Apical segments of mid tarsus entirely black. Cercus subtriangular, with acute disdorsal and drawn-out basoventral apices.

*Distribution.* Kenya.

### 16. *Hercostomus caprivi* GRICHANOV, spec. nov.

(Fig. 16)

*Holotype* [in alcohol]. ♂, Namibia: West Caprivi Park, Kwando River: Susuwe, 17°45'37"S, 23°20'55"E, 28.IX.-02.X.1998, A.H. KIRK-SPRIGGS, Malaise trap dry woodland [NMN].

*Paratypes* [in alcohol]. 4♂♂, 13♀♀, same label; 1♀, Namibia: West Caprivi Park, Kwando River: Susuwe, 17°45'37"S, 23°20'55"E, 26-29.IX.1998, A.H. KIRK-SPRIGGS, Multicolour pan tram, riverine edge [NMN].

*Description.* Male. General coloration of body bronze-green. Frons metallic bluish-green, face densely greyish-white pollinose, clypeus covered with microscopic hairs. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Upper postocular setae black, lateral and lower postoculars white. Eyes with short hairs. Face slightly narrowed towards middle, then parallel-sided; in middle as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 60: 26: 15; clypeus not reaching lower margin of eyes. Antenna as long as height of head, black; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel asymmetric, convex ventrally, right-angular apicodorsally, slightly longer than high, covered with microscopic hairs; stylus middorsal, black, arising from small prominence, pubescent, with hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 12: 9: 17: 20: 38. Palpus and proboscis small, yellow-brown, with short black hairs.

Thorax mostly bluish-bronze; mesonotum with 2 pairs of small black lateral spots (above notopleuron and pteropleuron); pleura blackish-bronze. 6 strong dorsocentral setae slightly decreasing in size anteriorly with several hairs in front of the 1<sup>st</sup> pair; 2 rows of acrostichals; 2 strong notopleural, 1 strong and 1 fine humeral, 1 posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and a group of black hairs in front of anterior spiracle. Scutellum with 2 strong setae, 2 lateral hairs and 2 pairs of inner microscopic

hairs not far from major setae.

Legs mostly yellow; fore coxa yellow except for extreme base; mid and hind coxae black except apex; hind femur with black spot at apex dorsally; hind tibia mostly black, yellow at extreme base; fore and mid tarsi brown-black from 2<sup>nd</sup> segment; hind tarsus black. Fore coxa with black hairs anteriorly and several black setae in apical half; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 strong external seta and several very short hairs. Fore femur with 1-2 posteroventral subapical hairs. Fore tibia with pair of dorsal and ventral setae at basal 1/3 and same pair at distal 1/3, 1 short posterodorsal at basal 1/4, 2-3 short apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of fore tarsus each with pair of apicoventral setulae and pair of tiny curved apicoventral hairs, as long as diameter of tarsomere; and group of the same but shorter apicodorsal hairs. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 90: 43: 18: 14: 11: 12. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 anteroventral, 1 posteroventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with apical and ventral strong setulae and very short sparse erect hairs hardly visible among ordinary setulae; 2<sup>nd</sup>-4<sup>th</sup> segments each with pair of long apicodorsal cilia, longer than corresponding tarsomere. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 120: 123: 57: 24: 18: 13: 14. Hind femur with one subapical anterior seta, 2-3 ventral hairs at base and 1-2 ventral hairs at 2/3, half as long as diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2 strong ventral, 3 apical setae and spear-shaped posterior cicatrix in basal 1/3. Hind basitarsus with 1 very short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments each with pair of posterior apical setulae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 140: 158: 50: 45: 33: 24: 17.

Wing simple, brownish, somewhat darker in anterior half; veins black. Costa with well developed elongate stigma at R<sub>1</sub>. R<sub>1</sub> 2/5 wing length. R<sub>2+3</sub> almost straight; R<sub>4+5</sub> slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 38: 16. M<sub>1+2</sub> almost straight, joining costa before wing apex; M<sub>1+2</sub> and R<sub>4+5</sub> slightly convergent in distal part. Cross-vein *m-cu* straight, positioned as perpendicular to longitudinal wing veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 26: 60. Posterior wing margin evenly convex. Anal vein distinct, almost reaching to wing margin; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bronze-black, with black hairs and short marginal setae increasing in length posteriorly. 6<sup>th</sup>-7<sup>th</sup> segments black, bare. 7<sup>th</sup> segment 1/4 longer than epandrium. 8<sup>th</sup> segment covering 1/3 of lateral side of epandrium, with numerous fine black cilia. Epandrium comparatively small, 1.7 times longer than high. Hypandrium midventral, short, fused to epandrium. Aedeagus thin, concealed. Epandrial lobe well developed, fused to epandrium, bearing 2 short apical setae; 1 longer epandrial seta. Surstylus bilobate, long; ventral lobe simple, pointed at apex, with 1 apical and 1 subapical strong setae; dorsal lobe

of surstylus as long as ventral lobe, with 1 strong basoventral seta and 2 setae in middle, bilobate at apex, with ventral fingerlike process bearing short apical spine. Postgonite nearly as long as surstylus, curved, with pair of short basal lobes. Cercus black, strongly projecting basoventrally, with short black simple marginal setae, with rounded basoventral and right-angular distal apices.

Length (mm): body 4.6, antenna 0.9, wing 4.0/1.4, 7<sup>th</sup> segment of abdomen 0.9, hypopygium 0.9.

*Distribution.* Namibia.

*Etymology.* The species is named after the type locality.

*Diagnosis.* The new species is keyed to *H. dimidiatus*, differing in ornamentation of tarsi: 2<sup>nd</sup>-4<sup>th</sup> segments of mid tarsus each having 2 apicodorsal long cilia; 1<sup>st</sup>-4<sup>th</sup> segments of fore tarsus each with pair of apicoventral setulae and pair of tiny curved apicoventral hairs, as long as diameter of tarsomere.

### 17. *Hercostomus congoensis* (CURRAN)

*Type material examined.* ♀, holotypus [red label] / [DR Congo:] Musée du Congo: Kibati; 28-V-1916, Dr. RODHAIN / R. Det. P 1160 / *Dolichopus congoensis* CURRAN, 1924; ♂, holotypus [red label] / Coll. Mus. Congo, Urundi Bururi, 1949, F. FRANÇOIS / P. VANSCHUYTBROECK det. 195?. *Hercostomus bururiensis* n.sp. [in coll.; *Nomen nudum*] / *Hercostomus congoensis* (CURRAN), det. GRICHANOV, 1998; paratype, ♂, Congo belge: Kivu, Rutshuru, riv. Kanza-rue, 1200 m, 16.VII.1935, G.F. DE WITTE: 1660 / Paratype / P. VANSCHUYTBROECK det. *Hercostomus pulchripes* n.sp. [ISNB].

*Material examined.* 1 ♂, ♀, Uganda: S.W., Ruwenzori Mts., 5 km W Kilembe, 2500 m, 6.I.1996, I. YAROM & A. FREIDBERG; 1 ♂, Uganda, Impenetrable Forest, S.W. Uganda, 27.I.72, A. FREIDBERG; 1 ♂, Kenya, Mt. Elgon Lodge, 1-6.XI.83, I. YAROM [TAU]; 2 ♂, 3 ♀♀, Urundi: Bururi [Astrida], alt. 1950 m, III.1948 [1700 m, 21.XI.1949; 2000 m, 12.IX.1948; 2000 m, 10.X.1948], F. FRANÇOIS / R.I.Sc.N.B. I.G. 24452 [ISNB]; 1 ♀, Congo belge: P.N.A., vers Mt. Kamatembe, vers 2300 m, 7 à 23.I.1935, G.F. DE WITTE: 1051 [ISNB].

*Diagnosis.* M<sub>1+2</sub> straight; M<sub>1+2</sub> and R<sub>4+5</sub> inconspicuously convergent. Hind basitarsus with 1-2 fine dorsal setae, 1.5 times longer than diameter of tarsomere, in addition to shorter anterior and ventral elongate setulae. Three last segments dorsally brownish, ventrally entirely silvery white. Male cercus dirty-white or yellow with brown margin, angular apically, incised apicoventrally, as long as wide, roundly projected basoventrally, with black falcate setae on apex and simple cilia otherwise. Postgonite broad, shorter than surstyli. Lobes of surstyli narrow, with short simple setae. Females have only 1 anteroventral seta on middle tibia. Size about 5 mm.

*Remark.* 1 ♂ and 1 ♀ from Madagascar determined by P. VANSCHUYTBROECK as *Dolichopus congoensis* CURRAN (RMCA, examined)

belong to *Diaphorus* sp. So, the species should be excluded from the fauna of the island.

*Distribution.* Congo (Kinshasa); Burundi, Kenya, Uganda.

### 18. *Hercostomus duviardi* COUTURIER

*Type material examined.* ♂, [Ivory Coast:] Cote d'Ivoire, Bouaké, F-Foro, 10.VI.74, G. COUTURIER leg. / Piège coloré, transect E / Holotype [red label] / *Hercostomus duviardi* n.sp. COUTURIER det. 1976 [MNHP].

*Material examined.* 1 ♂, 3 ♀, Congo Belge: P.N.G. Miss H. DE SAEGER, II/hd/9 [II/je/8, Dedegwa], 21.VIII.1951 [15.X.1951, 21.V.1952], H. DE SAEGER, 2297, 2600, 3499 [RMCA]; 3 ♂, Congo Belge: P.N.G. Miss H. DE SAEGER [12.XII.1952, 8.II.1952, 22.V.1952], H. DE SAEGER [RMCA]; 10 ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, [6.IX.1951, 15.X.1951, 31.X.1951, 5.XI.1951, 31.III.1952, 10.VII.1952, 9.IX.1952], H. DE SAEGER [RMCA]; 6 ♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 20.X.1951, 12.XII.1951, 4.III.1952, 21.V.1952, 17.V.1952, 15.VII.1952, H. DE SAEGER [RMCA]; 2 ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 5.XI.1951, 9.IX.1952, H. DE SAEGER [RMCA]; 1 ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/eb/9, 13.III.1952, H. DE SAEGER [RMCA]; 2 ♂, [Côte d'Ivoire], Marigot, salé [Ry-ny], 18.I & 19.II.71 [MNHP]; 1 ♂, 3 ♀, Gabon, Wolev-Ntem, Assok-Ngum, 21.II.1986, A. PAULY rec., bac jaune/coupe forestière [ISNB].

*Diagnosis.* The species belongs to the *H. strictilamellatus* group of species. It is closely related to *H. lictor*, differing in simple wing and fore leg, lighter antenna and hind femur, and hypopygium morphology. Cercus with middorsal brush of fore cilia, slightly longer than cercus, and apicoventral fingerlike process bearing 2 groups of short ventral setae. 7<sup>th</sup> segment 2/3 the length of epandrium.

*Distribution.* Ivory Coast; Congo (Kinshasa), Uganda, Gabon (!).

### 19. *Hercostomus freidbergi* GRICHANOV, spec. nov.

(Figs. 17-18)

*Holotype*, ♂, Tanzania: Usambara Mts., Gologolo, 1900 m, 23.VIII.1996, A. FREIDBERG [TAU].

*Paratype*, 1 ♂, same label.

*Description.* Male. Frons black, densely whitish pollinose; face densely silvery-white pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae white. Eyes with short hairs. Face glabrous, very narrow in middle, slightly widened at clypeus, 5 times higher than wide under antennae and 16 times higher than wide in middle; clypeus not reaching lower margin of eyes. Antenna as long as height of head, entirely black; pedicel short and high, inter-

nally convex anteriad, with short distal setulae; postpedicel asymmetric, angular apically, as long as high, glabrous; stylus middorsal, black, pubescent, with short hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 15: 6: 16: 11: 54. Palpus and proboscis small, black, with short black hairs; palpus with 1 short black seta.

Thorax black, scutellum yellowish on its under side; mesonotum brownish pollinose; pleura whitish pollinose. 6 strong dorsocentral setae; 2 rows of acrostichals nearly half as long as dorsocentrals; 2 strong notopleural, 1 strong and 2 fine humeral, 1 posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs with fore coxa, fore and mid femora yellow; mid and hind coxa blackish-brown with yellow apex; hind femur mostly yellow, brown dorsally in distal 1/4; fore tibia mostly brown, yellow at extreme base, white in distal 1/3; mid tibia brownish-yellow; hind tibia brown; fore tarsus with 1<sup>st</sup> segment black, whitish at extreme apex; 2<sup>nd</sup> segment white; 3<sup>rd</sup>-5<sup>th</sup> segments black; mid and hind tarsi black. Fore coxa with short black hairs anteriorly and several setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 strong external setae. Femora without long hairs. Fore tibia distinctly swollen in distal 1/3, with 1 anterodorsal, 2 posterodorsal, 1 apical short and fine setae. Fore basitarsus slightly widening apicad, with row of elongate dorsal setulae; 2<sup>nd</sup> segment of fore tarsus ventrally bare, with anterior row of hooked cilia, 2 times longer than diameter of tarsomere; 3<sup>rd</sup> segment rounded-oval, strongly flattened and widened, with dorsal fringe of black flattened setulae; 4<sup>th</sup> shortened, flattened and widened, with several short black and 5 long white dorsal setae; 5<sup>th</sup> with dorsal row of white setae, twice longer than diameter of tarsomere, anterior and posterior rows of black hairs, slightly longer than diameter. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 110: 120: 45: 55: 25: 10: 40. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 2 anterodorsal, 2 posterodorsal and 3-4 apical setae. Mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 135: 209: 114: 60: 50: 22: 13. Hind femur with one subapical anterodorsal seta at 3/4. Hind tibia slightly thickened at apex, with 3 anterodorsal, 3 posterodorsal, several fine short ventral, 3 apical setae and small posteroventral apical cicatrix following by small apical hook. Hind tarsus simple; basitarsus with 2 small basal hooks. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 185: 212: 81: 82: 50: 25: 14.

Wing simple, greyish, veins black. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 49: 14. M<sub>1+2</sub> and R<sub>4+5</sub> slightly but distinctly convergent; M<sub>1+2</sub> practically straight, joining costa just before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to

distal part of CuA<sub>1</sub>, 31: 48. Posterior wing margin almost evenly convex, shallowly concave at apex of CuA<sub>1</sub>. Anal vein distinct, not reaching to wing margin; anal lobe narrow; anal angle obtuse. Lower calypter yellow, brown at apex, with black setae. Halteres yellow.

Abdomen black, weakly pollinose, with black hairs and marginal setae. 7<sup>th</sup> segment as long as epandrium. 8<sup>th</sup> segment with fine black cilia. Hypopygium black, brown distally. Epandrium elongate-oval, twice longer than high. Foramen midlateral. Hypandrium midventral, swollen at base, with a few pairs of narrow entangled lobes; one of them serrate ventrally in basal half. Aedeagus thin, simple. Distoventral epandrial lobe fused to epandrium, projected, with 1 short and 1 very long apicoventral epandrial setae. Surstylus bilobate; ventral lobe short and thin, with long narrow apical process; dorsal lobe of surstylus longer and slightly wider than ventral lobe, simple, with 2 thick apical and subapical setae. Postgonite bifurcated; dorsal arm long and narrow, longer than dorsal lobe of surstylus; ventral arm short, lying between epandrial lobes, covered with short denticles. Cercus yellow, with short light hairs, large basolateral lobe bearing several long setae and long narrow apex bearing several strong setae.

Length (mm): body 5.1, antenna 1.1, wing 4.9/1.6, hypopygium 0.6.

Female unknown.

*Distribution.* Tanzania.

*Etymology.* The species is named for Israeli dipterologist and collector of the new species, Dr. Amnon FREIDBERG.

*Diagnosis.* The new species is closely related to *H. enghoffi* and *H. selikhovkini*, differing in having fore tibia mostly brown, white and swollen in distal 1/3; 2<sup>nd</sup> segment of fore tarsus white, with simple setulae.

## 20. *Hercostomus garambensis* GRICHANOV, spec. nov.

(Figs. 19-20)

*Holotype*, ♂, Congo Belge, P.N.G., Miss. H. DE SAEGER, II/fd/17, 8.V.1951, Réc. H. DE SAEGER, 1671 [RMCA].

*Description.* Male. General coloration of body dark, metallic greenish-blue. Frons metallic blue, weakly pollinose; face black, densely grey pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae black. Eyes with microscopic hairs; face glabrous. Face as elongate triangle under antennae, turning into narrow strip below middle; ratio of its maximal width to minimal width to height 10: 2: 24; clypeus not reaching lower margin of eyes. Antenna 1/5 longer than height of head, mostly black, light-brown at base of stylus; scape small, with several dorsal setulae; pedicel high, internally convex anteriad, with short setulae; postpedicel long and high, asymmetric, concave dorsally, convex ventrally, acute apicodorsally, 1.4 times longer than high, glabrous; stylus posi-

tioned at basal 3/10 of dorsal side, black, pubescent, with hairs longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 5: 5: 17: 10: 32. Palpus and proboscis small, brown, with short hairs; palpus with 1 short black seta.

Thorax dark; mesonotum metallic greenish blue, weakly pollinose; humeri brown; pleura brown-black, with bluish reflection, grey pollinose. 5 strong dorsocentral setae decreasing in size anteriorly with several hairs in front of the 1<sup>st</sup> pair; 2 rows of short acrostichals; 2 strong notopleural, 1 strong and 1 fine humeral setae present. Proepisternum with 1 strong black seta. Scutellum with 2 strong setae (broken) and 2 microscopic lateral hairs.

Legs mostly yellow; fore coxa dirty-yellow; mid coxa mostly brown; hind coxa brownish at base; hind femur brown in distal 1/2. Fore coxa with black hairs and several setae in apical half; mid coxa with 1 strong external seta in addition to anterior hairs; hind coxa with 1 external seta. Femora without long hairs. Fore leg simple; fore tibia with 2 posterodorsal and 1 anterodorsal fine setae. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 60: 50: 22: 7: 8: 7: 6. Mid femur with 1 subapical anterior seta and 1-2 stiff posteroventral hairs. Mid tibia with 3 anterodorsal, 3 posterodorsal, 4-5 short ventral and 5 apical setae. Mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 66: 69: 37: 19: 17: 11: 8. Hind femur with one subapical anterior seta and elongate dorsal hairs in basal half. Hind tibia with 3 anterodorsal, 3 posterodorsal, 4 fine ventral, 2-3 apical setae. Hind basitarsus with 2-3 basoventral and 1 apicoventral short seta; 2<sup>nd</sup>-5<sup>th</sup> segments simple. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 69: 82: 24: 33: 17: 12: 7.

Wing hyaline, veins yellow-brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> and R<sub>4+5</sub> straight, slightly diverging at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 19: 10. M<sub>1+2</sub> and R<sub>4+5</sub> inconspicuously convergent, almost parallel. Crossvein *m-cu* straight, almost perpendicular to longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 12: 37. Posterior wing edge with several elongate cilia in basal 1/3 of a distance between apices of CuA<sub>1</sub> and M<sub>1+2</sub>; the cilia 1.5-2 times longer than ordinary hairs. Anal vein distinct, almost reaching to wing margin; anal lobe pronounced; anal angle obtuse. Lower calypter yellow-brown, with black setae. Halteres yellow.

Abdomen bluish-bronze-black, weakly pollinose, with black hairs and marginal setae. Postabdomen brown-black, appendages of hypopygium brownish-yellow. Epandrium of moderate size, highest at middle, narrowed distad. Hypandrium positioned at basal 1/3 of epandrium, 2/3 as long as epandrium, with long narrow basolateral lobes. Aedeagus thin, simple. Foramen positioned in basal half of left lateral side of epandrium. Epandrial lobe fused to epandrium; 1 long and several short epandrial setae raising at apicoventral angle of epandrium. Surstylus broad, massive, with 1 strong apical seta. Postgonite

longer than surstylus, narrow, broadened and curved ventrad at apex. Cercus with basoventral brush of long cilia and short lobes at apex; ventral lobe longer than dorsal, with pair of strong apical setae.

Length (mm): body 2.1, antenna 0.7, wing 2.2/0.7, hypopygium (including cercal setae) 0.8.

*Etymology.* The species is named for the type locality (Garamba National Park).

*Diagnosis.* *H. garambensis* is closely related to *H. duviardi*, differing in having cercus with basoventral brush of glued cilia, slightly longer than cercus.

*Distribution.* Congo (Kinshasa).

## 21. *Hercostomus heinrichi* GRICHANOV, spec. nov.

(Figs. 21-23)

*Holotype*, ♂, [Tanzania:] Tanganyika: Melando Forest, 30 mi. S of Njombe, 2450 m, X.1962, leg. G. HEINRICH [NHRS].

*Paratypes*, 3♂♂, 8♀♀, same label; 3♂♂, 8♀♀, Tanganyika: Rungve Mt., 2600 m, 20 mi. SSE Mvoya, leg. G. HEINRICH, 1962 [NHRS; all material mounted on pins from alcohol].

*Description.* Male. Frons black, densely whitish pollinose; face densely silvery-white pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae white. Eyes with short hairs. Face glabrous, gradually narrowing towards palpi, 2-2.5 times higher than wide under antennae and 6 times higher than wide at suture; clypeus not reaching lower margin of eyes. Antenna slightly longer than height of head, mostly blackish-brown; scape reddish; pedicel short and high, internally convex anteriad, with short distal setulae; postpedicel asymmetric, suboval, nearly right-angular apicodorsally, 1.5 times as long as high, glabrous; stylus middorsal, black, pubescent, with short hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 10: 4: 13: 8: 24. Palpus and proboscis small, brownish-yellow, with short black hairs; palpus with 1 short black seta.

Thorax mostly brownish-yellow, mesonotum mostly brown, weakly shining; pleura whitish pollinose. 6 strong dorsocentral setae; 7-8 pairs of acrostichals nearly half as long as dorsocentrals; 2 strong notopleural, 1 strong and 2 fine humeral, 1 posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs with all coxa, femora and tibia yellow; basitarsi yellow, brown at extreme apex; 2<sup>nd</sup>-5<sup>th</sup> segments of tarsi brown-black. Fore coxa with short black hairs anteriorly and several black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 strong external setae. Femora without long hairs; anterior four femora bare ventrally. Fore tibia with 1

anterodorsal, 2 posterodorsal, 1 apical short and fine setae. First two segments of fore tarsus long and thin, with simple setulae; 3<sup>rd</sup> segment strongly flattened and widened, with dorsal fringe of black flattened setulae; 4<sup>th</sup> shortened, flattened and slightly widened, with several short black dorsal setae; 5<sup>th</sup> with dorsal row of white setae, twice longer than diameter of tarsomere. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 57: 67: 40: 69: 14: 3: 14. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. Mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 74: 115: 65: 36: 27: 13: 9. Hind femur with one subapical anterodorsal seta at 3/4. Hind tibia with 3 anterodorsal, 3 posterodorsal, several fine short ventral, 3 apical setae and small posteroventral apical cicatrix following by small apical hook. Hind tarsus simple; basitarsus with 2 very small basal hooks. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 95: 128: 42: 49: 25: 10: 10.

Wing simple, greyish, veins brown. Costa simple. R<sub>1</sub> reaching to first fourth of wing length. R<sub>2+3</sub> straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 26: 6. M<sub>1+2</sub> and R<sub>4+5</sub> distinctly convergent; M<sub>1+2</sub> slightly but distinctly convex, joining costa just before wing apex. Crossvein *m-cu* slightly convex, forming nearly right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 16: 28. Posterior wing margin almost evenly convex. Anal vein distinct, not reaching to wing margin; anal lobe narrow; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen mostly brown, weakly pollinose, with black hairs and long marginal setae; 1<sup>st</sup>-3<sup>rd</sup> tergites broadly yellow laterally; 4-5<sup>th</sup> with reddish-yellow lateral spots. 7<sup>th</sup> segment brown, 1/4 longer than epandrium. 8<sup>th</sup> segment yellow, with fine black cilia. Hypopygium yellow, with yellow setae and appendages. Epandrium elongate, twice longer than high. Foramen midlateral. Hypandrium midventral, with at least 3 pairs of short and long entangled lobes. Aedeagus thin, projected. Distoventral epandrial lobe fused to epandrium, projected, with 2 short and 1 very long apicoventral epandrial setae. Surstylus bilobate, with simple lobes of equal length. Postgonite bifurcated; dorsal arm long and narrow, longer than dorsal lobe of surstylus; ventral arm short, lying between distodorsal epandrial lobes, at base covered with short denticles. Cercus yellow, with short light hairs, large basolateral lobe bearing 3 long setae and long narrow apex bearing pair of strong apical and several short subapical setae.

Length (mm): body 4.3, antenna 1.1, wing 4.8/1.4, 7<sup>th</sup> segment 0.9, hypopygium 1.0.

Female similar to male except as follows. Face wider, 2 times as high as wide under antenna and 3 times as high as wide at suture; postpedicel shorter, as long as high; major setae on legs are somewhat stronger in female than in male.

*Distribution.* Tanzania.

*Etymology.* The species is named for the collector of the new species.

*Diagnosis.* The new species is closely related to *H. enghoffi* and *H. selikhovkini*, differing in morphology of fore tarsus and fine structures of hypopygium. 2<sup>nd</sup> segment of fore tarsus as long as fore tibia, with simple setulae; 3<sup>rd</sup> segment of the same tarsus equal to 5<sup>th</sup>; 4<sup>th</sup> segment of fore tarsus without lobe.

## 22. *Hercostomus infirmus* PARENT

*Type material examined.* ♀ holotypus [red label] / [DR Congo:] Musée du Congo, Elisabethville, R. Komitoto, XI-1928, Dr. M. BEQUAERT / R.Det. J 2414 / *Hercostomus infirmus* n.sp. ♀, Type, O. PARENT.

*Diagnosis.* Female described by PARENT (1933) resembles *H. perturbus* and could be recognised by the following characters. Antenna black; postpedicel as long as high, with acute apex. Lower postocular setae black. Wing vein M<sub>1+2</sub> straight; M<sub>1+2</sub> and R<sub>4+5</sub> slightly convergent. Crossvein *m-cu* approximately equal in length to distal part of CuA<sub>1</sub>. Metaepimeres and abdominal ventrum yellow. Legs mostly yellow. All coxae yellow, mid coxa with brownish external spot; hind femur with black spot dorsally above. Fore tibia with 2 fine dorsal setae. Mid tibia with 2 anterodorsal, 2 posterodorsal, 1 or 2 fine ventral setae. Hind tibia with 3 anterodorsal and 4 posterodorsal setae. Size about 3 mm.

*Distribution.* Congo (Kinshasa).

## 23. *Hercostomus intercedens* GRICHANOV, spec. nov. (Figs. 24-25)

*Holotype*, ♂, [Equatorial Guinea:] (Fernando Po) R. Te, De San-Carlos, km. 36, Bord Rio Pae, 11.XI.1970, L. MATILE rec. [MNHP].

*Paratype*, ♂, Museum Paris, Rep. Pop. Congo, L. MATILE / Pool Forêt de Meya Nzouari, 1.XI.1975 [MNHP].

*Description.* Male. Frons black, grey pollinose; face densely white pollinose. One long and strong vertical at the top of head, one short postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Lower postocular setae black. Eyes with short hairs; face glabrous, slightly narrowing towards clypeus; face under antennae as wide as height of postpedicel, 2 times higher than wide; clypeus not reaching lower margin of eyes. Antenna slightly longer than height of head, black; scape with short pointed inner apical process; pedicel reduced, almost invisible in outer view, internally convex anteriorly, with short distal setulae; postpedicel subtriangular, with acute apex and short hairs, 1.5 times as long as high at base; stylus middorsal, black; 2<sup>nd</sup> segment of stylus filiform, with hairs as long or slightly longer than basal diameter of stylus. Length ratio of scape to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 6: 16: 9: 53. Palpus and proboscis small, brown, with short black hairs; palpus with 1 short black seta.

Mesonotum brown (holotype) or black (paratype), weakly shining; pleura

light-brown, whitish pollinose. 5 strong dorsocentral setae with several hairs anteriorly; acrostichals biseriate; 1 strong and 1 short humeral, 1 posthumeral setae present. Propleura with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs including coxae mostly yellow; mid coxa brown externally; tarsi brown-black from tip of basitarsus. Fore coxa with black hairs anteriorly and several black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 strong external setae. Femora without long hairs. Fore tibia with 1 short anterodorsal, 1 posterodorsal and 2 apicodorsal setae; fore basitarsus with 1 short basoventral seta. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 65: 62: 33: 14: 11: 9: 9. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short ventral setae. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 80: 87: 43: 28: 22: 14: 11. Hind femur with 1 anterodorsal seta at 4/5. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, several weak ventral and 2-3 apical setae. Hind basitarsus with 1 basoventral seta, half as long as basitarsus; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apical and ventral setulae. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 90: 111: 21: 42: 28: 20: 12.

Wing greyish, slightly darker along costa, veins brown. Costa simple.  $R_{2+3}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 29: 15.  $R_{4+5}$  and  $M_{1+2}$  inconspicuously convergent, parallel at wing apex.  $M_{1+2}$  joining costa at wing apex. Crossvein *m-cu* almost straight, perpendicular to longitudinal wing axis. Ratio of *m-cu* to distal part of  $CuA_1$ , 20: 31. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres orange-yellow.

Abdomen black, weakly pollinose. 7<sup>th</sup> segment very short. 8<sup>th</sup> segment black, with sparse fine dark cilia. Epandrium black-brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, swollen basally, narrow distally. Hypandrium long, asymmetric, with at least 2 long lobes; one lobe having rounded apex, another lobe with pointed apex. Distoventral epandrial lobes asymmetric; right lobe 2 times larger than left lobe, having digitiform process; 1 strong epandrial seta just before epandrial lobe. Postgonite as long as surstyli, narrow, slightly curved ventrad. Surstylus brown, curved, with 2 narrow lobes, with a few short subapical setae; ventral lobe rounded at apex; dorsal lobe with pointed apex. Cercus black, subtriangular, as long as wide, covered entirely with mostly simple black marginal setae of equal length.

Female unknown.

Length (mm): body 2.3-2.6, antenna 1.1, wing 2.9-3.3/1.0, hypopygium 0.8.

*Distribution.* Equatorial Guinea (Bioko I.), Congo (Brazzaville).

*Etymology.* The name of the species belongs to his intermediate position within the genus.

*Diagnosis.* The new species is remarkable in having greatly reduced pedicel, distinctly but short-pubescent stylus and parallel  $R_{4+5}$  and  $M_{1+2}$  wing veins. *H. intercedens* keys out to *H. scharffi*, differing in having subtriangular black cercus.

#### 24. *Hercostomus itineris* GRICHANOV, spec. nov.

(Figs. 26-27)

*Holotype*, ♂, Cameroun, N'Kolbisson, 25.X.1970, L. MATILE rec. / Bords chemin [NHMP].

*Description.* Male. General coloration of body dark, metallic greenish-blue or violet. Frons metallic green-blue, weakly pollinose; face black, densely grey pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae black. Eyes with microscopic hairs; face glabrous. Face narrow below middle; clypeus slightly wider than epistome at suture, not reaching lower margin of eyes. Antenna 1/4 longer than height of head, mostly black, brown at base of stylus; scape small, with several dorsal setulae; pedicel high, internally convex anteriorly, with short setulae; postpedicel long and high, asymmetric, concave dorsally, convex ventrally, acute apicodorsally, 2 times longer than high, microscopically pubescent; stylus positioned at basal 1/3 of dorsal side, black, pubescent, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of pedicel to postpedicel to stylus, 5: 16: 38. Palpus and proboscis small, brown, with short hairs; palpus with 1 short black seta.

Thorax dark; mesonotum metallic greenish blue, pollinose; pleura bronze-black, with bluish reflection, grey pollinose. 5 strong dorsocentral setae decreasing in size anteriorly with several hairs in front of the 1<sup>st</sup> pair; 2 rows of short acrostichals; 2 strong notopleural, 1 strong and 1 fine humeral setae present. Proepisternum with 1 strong black seta. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; all coxae brown-black; hind femur dark-brown except base; apical segments of tarsi slightly darkened. Fore coxa with black hairs and several setae in apical half; mid coxa with 1 strong external seta in addition to anterior hairs; hind coxa with 1 external seta. Femora without long hairs. Fore tibia with 1 posterodorsal, 1 anterodorsal fine setae, anterodorsal row of strong elongate setulae in distal half, 1-2 short apical setae. Fore tarsus with somewhat elongate ventral hairs; 5<sup>th</sup> segment inconspicuously swollen, with elongate dorsal hairs. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 48: 43: 24: 9: 6: 5: 6. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 1 dorsal, 2-3 anterodorsal, 2-3 posterodorsal, 5 fine ventral and 5 apical setae. Mid tarsus simple. Length ratio of

mid femur to tibia to tarsus (segments from first to fifth), 61: 68: 35: 19: 15: 10: 7. Hind femur with one subapical anterior seta. Hind tibia with 3 anterodorsal, 3 posterodorsal, 4-6 fine ventral, 3-4 apical setae. Hind basitarsus with 1 short basoventral seta; 2<sup>nd</sup>-5<sup>th</sup> segments simple. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 65: 80: 20: 28: 15: 12: 7.

Wing almost hyaline, veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> and R<sub>4+5</sub> straight, slightly diverging at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 20: 10. M<sub>1+2</sub> and R<sub>4+5</sub> inconspicuously convergent, almost parallel. Crossvein *m-cu* slightly convex, almost perpendicular to longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 12: 28. Posterior wing edge almost evenly convex. Anal vein distinct, not reaching to wing margin; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halter with yellow stem and brown knob.

Abdomen bluish-bronze-black, weakly pollinose, with black hairs and marginal setae; postabdomen dark. Epandrium of moderate size, suboval, highest at middle, narrowed distad. Hypandrium midventral, half as long as epandrium, bilobate; ventral lobe wider and longer than dorsal. Aedeagus thin, simple. Foramen positioned in basal half of left lateral side. Epandrial lobe undeveloped; 1 long and 1 short epandrial setae raising at base of surstylus. Surstylus bilobate; ventral lobe short, with 5 short setae; dorsal lobe of surstylus twice longer than ventral lobe, with 1 apical and 1 subapical short setae. Postgonite reaching to apex of surstylus, narrow, swollen and curved ventrad at apex. Cercus having 2 short lobes at apex and basal fan of long cilia directed distad; ventral lobe with 2 strong apical setae of equal length; dorsal lobe with 4 short apical setae.

Length (mm): body 2.0, antenna 0.6, wing 1.9/0.7, hypopygium (without setae) 0.5.

*Distribution.* Cameroon, Ivory Coast.

*Etymology.* The name of the species originates from the Latin word *iter* (road)

*Diagnosis.* The new species is close to *H. laanmae*, differing in cercus having two narrow short subequal apical processes.

## 25. *Hercostomus jani* DYTE

*Material examined.* 1♂, Cameroon, NSOP, 18.VII.1981, G.G.M. SCHULTEN [ZMA]; 1♂, Malawi: North Nyika National Park, Zovo-Chipolo Forest, 25-26.IX.1998, F. KAPLAN & A. FREIDBERG [TAU].

*Diagnosis.* 4<sup>th</sup> segment of mid tarsus with rows of numerous black bristles above and below; the dorsal ones being in length about 3 times the width of basitarsus; hind basitarsus without dorsal setae; 5<sup>th</sup> segment of mid and hind tarsi dorsally silvery pilose.

*Distribution.* Tanzania; Congo (Kinshasa), Cameroon (!), Malawi (!).

## 26. *Hercostomus kefaensis* GRICHANOV, spec. nov.

(Fig. 28)

*Holotype*, ♂, Ethiopia: Kefa, Jimma, 55 km S, Forest & River, 12.II.2000, A. FREIDBERG & I. YAROM [TAU].

*Paratypes*, 4♂♂, 3♀♀, same label.

*Description.* Male. Similar to *H. balensis* spec. nov. in many respects except as noted. Frons and face densely white pollinose; frons blue-black, face brown-black. Antennal postpedicel asymmetric, slightly concave dorsally, convex apicoventrally, acute apicodorsally, 2.5-3 times longer than high; stylus positioned just before middle of dorsal side. Length ratio of scape to pedicel to postpedicel to stylus, 11: 6: 30: 51. Thorax green-black with weak metallic reflection, metaepimeron yellow.

Legs including coxae mostly yellow; mid coxa darkened, hind femur brown at extreme apex; hind tibia dirty yellow; tarsi black from tip of basitarsus, hind basitarsus brownish. Fore tibia with 2 posterodorsal very short setae. 3<sup>rd</sup> segment of fore tarsus flattened and strongly widened, with dorsal comb of short black setulae; 4<sup>th</sup> and 5<sup>th</sup> segments with semi-accumbent dorsal hairs, 4<sup>th</sup> segment with black and 5<sup>th</sup> segment with black and white hairs. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 92: 105: 57: 60: 40: 8: 10. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 110: 160: 83: 45: 37: 19: 14. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 144: 194: 50: 65: 38: 20: 14.

Abdomen mostly black, with 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> segments broadly reddish-yellow laterally; sometimes 4<sup>th</sup> tergite with small brownish lateral spot; 7<sup>th</sup> segment brown, as long as epandrium; 8<sup>th</sup> segment yellow, with fine black cilia. Hypopygium reddish yellow with yellow appendages, weakly pollinose. Epandrium elongate-oval, twice longer than high. Foramen left midlateral. Hypandrium midventral, swollen at base; 3-4 pairs of entangled lobes of different length and width. Aedeagus thin, weakly projected. Epandrial lobe undeveloped; 2 short and 1 very long apicoventral epandrial setae. Surstylus bilobate; ventral lobe 2/3 the length of dorsal lobe, with 1 short apical seta; dorsal lobe of surstylus longer and wider than ventral lobe, narrowed in apical half, with 1 strong basodorsal seta. Postgonite widely bifurcated; dorsal arm longer than surstylus, narrow; ventral arm short and thick, projecting apicoventrally, having no tooth. Cercus yellow, with light cilia; cercus in distal part densely covered with hairs longer than cercus width; 3 strong pedunculate setae raising from short and broad process at middle; basoventral lobe nearly 2/3 as long as cercus, with bunch of about 9 long apical setae; the setae longer than cercus, undulate at apex.

Female similar to male except as follows. Face wider, as wide as height of postpedicel; clypeus somewhat bulging. Postpedicel slightly longer than high. Legs simple.

Length (mm): body 3.4-3.5, antenna 0.9, wing 3.5-3.9/1.2, hypopygium 0.8.

*Distribution.* Ethiopia.

*Etymology.* The species is named for the country (province) of origin.

*Diagnosis.* The new species is close to *H. balensis*, differing in postpedicel being 2.5-3 times longer than high and 4-5<sup>th</sup> segments of fore tarsus having mostly black accumbent setulae. Cercus with large fungaceous basolateral process, 2/3 the length of cercus, with about 9 long setae.

### 27. *Hercostomus krivokhatskii* GRICHANOV

*Material examined.* ♂, Rep. Centrafric., Dept. de la Lobaye, Forêt de M'Balé, Lisière, 7.IX.1967, L. MATILE rec. [NHMP].

*Diagnosis.* The new species is somewhat close to *H. panteleevae* and *H. ovchinnikovae*. It is distinguished by cercus yellow, slim, slightly narrowed at middle, covered with sparse hairs not longer than width of cercus; surstylus large and massive, nearly reaching to apex of cercus.

*Distribution.* Congo (Kinshasa); Central African Republic (!).

### 28. *Hercostomus krivosheinae* GRICHANOV

*Material examined.* ♂, Cameroun, Env. de Ongot, Route de Doualat, 5.VIII.1967, L. MATILE / Museum Paris, Rives de ruisseau encaisse [NHMP].

*Diagnosis.* 3<sup>rd</sup> segment of fore tarsus weakly widened, 2/3 the length of 2<sup>nd</sup>, 1<sup>st</sup> segment of same tarsus longer than 2<sup>nd</sup>, epandrium strongly projected apicoventrally. *H. krivosheinae* is closely related to *H. mostovskii*, differing in cercus somewhat projected apicoventrally, with dorsal subapical tubercle and indistinct basolateral eminence.

*Distribution.* Uganda; Cameroon (!).

### 29. *Hercostomus lictor* PARENT

*Type material examined.* Holotype, ♂, Congo Belge: Eala, VIII.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 / *Hercostomus lictor* n.sp. Type, O. PARENT / Type [red label]; paratypes, 1 ♂ (destroyed) and 16 ♀♀, same labels differing in collection dates, with additional red label "paratype".

*Material examined.* 2♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 7.VII.1952, 10.VII.1952, H. DE SAEGER [RMCA]; ♂, [Côte d'Ivoire], Marigot, salé, 15 Janv. 71 [MNHP]; ♂, Cameroun, Yaounde-N'Kolbisson, 26.07.1967, L. MATILE rec. / Museum Paris; 2♂♀, C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise 4, 22.II.-3.III.1998, leg. KASSEBEER & HILGER [ZIUK].

*Diagnosis.* The species belongs to the *H. strictilamellatus* group of species, differing in simple fore tibia; 5<sup>th</sup> segment of fore tarsus slightly swollen,

with slightly enlarged claws; posterior wing margin slightly convex at the 1<sup>st</sup> third of a distance between CuA<sub>1</sub> and M<sub>1+2</sub> and bearing several long cilia there. Cercus with basodorsal brush of glued cilia, twice longer than cercus, and apicoventral narrow process bearing 2 strong apical setae. 7<sup>th</sup> segment 2/3 the length of epandrium.

*Distribution.* Congo (Kinshasa); Nigeria, Cameroon (!), Ivory Coast (!).

### 30. *Hercostomus minimixtus* DYTE et SMITH

*Material examined.* 2♂♂, Congo Belge: P.N.G., Miss. H. DE SAEGER, Dedegwa, 17, 21.V.1952, H. DE SAEGER, 3481, 3499 [RMCA]; ♂, Congo belge: Kalumegongo (1780 m), 21.I.1948, Miss. G.F. DE WITTE, 1217a / P. VANSCHUYTBROECK det. 1952, *Saccophieronta bicolor* PARENT [ISNB].

*Diagnosis.* The species belongs to the *H. strictilamellatus* group of species. It differs from other species in smaller size, simple wing and fore leg, and hypopygium morphology. Cercus simple, evenly covered with cilia; cercus short, at most 3 times longer than wide, slightly longer than surstylus, half as long as height of epandrium. 7<sup>th</sup> segment 1/2 the length of epandrium.

*Distribution.* Congo (Kinshasa).

### 31. *Hercostomus nectarophagus* CURRAN

*Type material examined.* Paratype, ♂ [without abdomen; red label] / Musée du Congo, Afr. S.: East London, 29-4-1924, MUNRO, ex coll. CURRAN / R.Det. E 1341 / Paratype *Hercostomus nectarophagus* CURRAN [RMCA].

*Material examined.* 1 ♀, S. Africa: Natal, #29, St. Helier - Magnolia, 29°48' S, 30°47' E, 540 m, Date: 5.V.1992, Weed encroached Giba river, Coll.: A.E. WHITTINGTON [NMP].

*Diagnosis.* *H. nectarophagus* differs from other species in simple tarsi except somewhat modified fore tarsus as follows. Fore tarsus with regularly decreasing tarsomeres 1-4; 1<sup>st</sup> and 2<sup>nd</sup> segments yellow; 3<sup>rd</sup> and 4<sup>th</sup> brown; 4<sup>th</sup> and 5<sup>th</sup> slightly thickened; 4<sup>th</sup> segment yellowish, 5<sup>th</sup> segment whitish-yellow, covered with short white dorsal hairs. Males have 4-5<sup>th</sup> segments of fore tarsus yellowish ventrally, with several elongate light dorsal hairs, or entirely dark, with dark hairs; lower postocular setae white; M<sub>1+2</sub> and R<sub>4+5</sub> inconspicuously convergent. Male cercus (see Fig. 19 in GRICHANOV, 1999) with large basolateral lobe bearing several strong setae and thin distal part having several long cilia at apex.

*Distribution.* South Africa; Tanzania, Uganda, Cameroon.

### 32. *Hercostomus ngozi* GRICHANOV, spec. nov.

(Figs. 29-30)

*Holotype*, ♂, Tanzania: Ngozi Crater, nr. Rt. A345, 2000-2200 m,



1.IX.1996, A. FREIDBERG [TAU].

*Description.* Male. Head depressed of shrinkage. Frons black, densely whitish pollinose; face densely white pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae white. Eyes with short hairs. Face glabrous, narrow, gradually narrowed towards palpi; clypeus not reaching lower margin of eyes. Antenna as long as height of head, with scape and pedicel brown, postpedicel black; pedicel short and high, internally convex anteriad, with short distal setulae; postpedicel asymmetric, angular apically, 1/3 longer than high, glabrous; stylus middorsal, black, pubescent, with short hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 12: 8: 20: 12: 41. Palpus and proboscis small, brown, with short black hairs; palpus with 1 short black seta.

Mesonotum mostly black with weak metallic greenish reflection, brown laterally, light-brown at humeri, brownish pollinose; pleura whitish pollinose, yellow-brownish, with small black spot below lower calypter and small brown spot above hind coxa. 6 strong dorsocentral setae; 2 rows of acrostichals nearly half as long as dorsocentrals; 2 strong notopleural, 1 strong and 2 fine humeral, 1 posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs including fore and hind coxae yellow; mid coxa yellow with brown external spot; hind femur brownish dorsally at apex; all tarsi black from tip of basitarsus. Fore coxa with short black hairs anteriorly and several setae at apex; mid coxa with 1 strong external seta in addition to anterior hairs; hind coxa with 1 strong external setae. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 1 apicodorsal fine setae. 3<sup>rd</sup> segment of fore tarsus flattened and widened, with dorsal fringe of black flattened setae; 4<sup>th</sup> shortened, with several short black and white dorsal setae; 5<sup>th</sup> with dorsal row of white setae, twice longer than diameter of tarsomere. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 65: 100: 112: 64: 112: 26: 6: 15. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral at distal 1/3 and 3-4 apical setae. Mid tarsus simple. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 55: 125: 197: 113: 56: 44: 23: 14. Hind femur with one subapical anterodorsal seta at 3/4. Hind tibia with 3 anterodorsal, 3-4 posterodorsal, 4-5 fine ventral, 3 apical setae and small posteroventral apical hook. Hind tarsus simple; basitarsus with small basal hook posteriorly. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 36: 168: 226: 70: 80: 48: 21: 15.

Wing simple, greyish, veins black. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 49: 10. M<sub>1+2</sub> and R<sub>4+5</sub> distinctly convergent; M<sub>1+2</sub> with weak flexion at proximal 1/3 of distal part, joining costa just before wing apex.

Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 28: 48. Posterior wing margin evenly convex. Anal vein distinct, not reaching to wing margin; anal lobe narrow; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen mostly blackish-brown, weakly pollinose, with black hairs and marginal setae; 1<sup>st</sup>-6<sup>th</sup> tergites with large yellow-brownish lateral spots. 7<sup>th</sup> segment dark-brown, as long as epandrium. 8<sup>th</sup> segment yellow, with fine black cilia. Hypopygium dirty-yellow, with yellow appendages.

Epandrium elongate, nearly twice longer than high, with somewhat concave ventral margin (lateral view). Foramen just before middle of left lateral side. Hypandrium positioned at basal 1/3 of ventral side, swollen at base, with 4-5 broad and narrow entangled lobes of various length. Aedeagus thin, projected. Distoventral epandrial lobe fused to epandrium, reduced, with 1 short and 1 very long apicoventral epandrial setae. Surstylus bilobate; inner (ventral) lobe short and thin, with long narrow apical process; outer (dorsal) lobe of surstylus longer and slightly wider than ventral lobe, with short thick apical seta. Postgonite bifurcated; dorsal arm long and narrow, as long as dorsal lobe of surstylus; ventral arm short, lying between distoventral epandrial lobes, covered with small denticles at base. Cercus yellow, with short light hairs, large basolateral lobe bearing 3 long setae and long narrow apex bearing several long setae.

Length (mm): body 4.5, antenna 1.0, wing 5.0, hypopygium 1.0.

*Distribution.* Tanzania.

*Etymology.* The species is named after the type locality.

*Diagnosis.* The new species is closely related to *H. tobiassi*, differing in length ratio of fore tarsomeres and fine structures of hypopygium. 2<sup>nd</sup> segment of fore tarsus 2 times longer than 1<sup>st</sup> and 4 times longer than 3<sup>rd</sup>; 4<sup>th</sup> segment of the same tarsus without lobe; mid tibia with ventral seta at 2/3.

### 33. *Hercostomus ovchinnikovae* GRICHANOV

*Material examined.* 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, PpK/56/d/8, 27.II.1952, H. DE SAEGER, 3149 [RMCA]; 11♂, Congo Belge: P.N.G. Miss H. DE SAEGER [24.IX.1951, 27.IX.1951, 28.IX.1951, 8.XI.1951, 5.II.1952, 6.II.1952], H. DE SAEGER [RMCA]; 33♂, Congo Belge: P.N.G. Miss H. DE SAEGER [], H. DE SAEGER [RMCA]; 49♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 22.II.1951, 25.IV.1951, 30.IV.1951, 12.X.1951, 20.X.1951, 28.X.1951, 8.XI.1951, 14.XI.1951, 12.XII.1951, 13.XII.1951, 14.XII.1951, 18.XII.1951, 21.XII.1951, 2.I.1952, 3.I.1952, 19.I.1952, 4.II.1952, 5.II.1952, 12.II.1952, 8.III.1952, 13.III.1952, 3.V.1952, 21.V.1952, 16.VII.1952, 9.IX.1952, 10.IX.1952, H. DE SAEGER [RMCA]; 4♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 20.X.1951, 13.III.1952, 24.VII.1952, H. DE SAEGER [RMCA]; 5♂♂, 1♀, [Côte d'Ivoire], Marigot, salé, *Z. raphia*, 4.III.1971, 28-

29.IV.1971, 7.IX.1971 [NHMP], C.I., 15 km N' Man, Cascades, 5500 m, 7°30' N, 7°30' W, 20.II.1998, leg. KASSEBEER & HILGER [ZIUK].

*Diagnosis.* The species is close to *H. panteleevae*, differing in cercus gradually narrowed distad and evenly covered with long cilia; two lobes of postgonite: 1<sup>st</sup> one longer than surstylus, scooplike, swollen in apical part, acute at apex; 2<sup>nd</sup> process acicular, nearly as long as 1<sup>st</sup>.

*Distribution.* Congo (Kinshasa), Ivory Coast (!).

### 34. *Hercostomus ozerovi* GRICHANOV

*Material examined.* 1♂, Ethiopia, Gamo Gofa, Chench, 40 km NW, Arba Minch, 2800 m, 6.II.2000, I. YAROM & A. FREIDBERG [TAU].

*Diagnosis.* Having cercus with large fungaceous basolateral process, the species is close to *H. scotti* and *H. yakovlevi*. *H. ozerovi* differs in 3<sup>rd</sup> segment of fore tarsus weakly widened, at least 4 times longer than wide, 3/4 the length of 2<sup>nd</sup>; cercus with only several long cilia in distal part; basolateral process of cercus of moderate size, 1/2 the length of cercus, with about 10 long setae.

*Distribution.* Uganda, Kenya, Ethiopia.

### 35. *Hercostomus pseudolictor* GRICHANOV, spec. nov.

(Fig. 31)

*Holotype*, ♂, [Guinea:] Thuo (R.A. Lola), Guinée, 05.X.1980, C. BAKARY / Sous les bananiers et feuilles de taro [ISNB].

*Paratypes*, 3♂♂, [Ivory Coast:] C.I., SWW' Man, Idessa, Bachlauf, 20.II.1998, 7°21' N, 7°36' W, leg. KASSEBEER & HILGER [ZIUK].

*Description.* Male. Head depressed of shrinkage. General coloration of body dark, metallic greenish-blue. Frons metallic blue, whitish pollinose; face black, densely grey pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Lower postocular setae black. Eyes with microscopic hairs. Face glabrous, gradually narrowing, turning into narrow strip below middle; clypeus not reaching lower margin of eyes. Antenna 1/5 longer than height of head, mostly black, brown at base of stylus; scape small, with several dorsal setulae; pedicel high, internally convex anteriorly, with short setulae; postpedicel long and high, asymmetric, concave dorsally, convex ventrally, acute apicodorsally, 1.5 times longer than high at base, microscopically pubescent; stylus positioned at basal 3/10 of dorsal side, black, pubescent, with hairs longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 10: 7: 17: 44. Palpus and proboscis small, brown, with short hairs; palpus with 1 short black seta.

Thorax dark; mesonotum metallic greenish blue, weakly pollinose; pleura brown-black, with bluish reflection, grey pollinose. 5 strong dorsocentral setae decreasing in size anteriorly with several hairs in front of the 1<sup>st</sup> pair; 2 rows of

short acrostichals; 2 strong notopleural, 1 strong and 1 fine humeral setae present. Proepisternum with 1 strong black seta. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; coxae brown with yellow apex; hind femur brown in distal 2/3. Fore coxa with black hairs and several setae in apical half; mid coxa with 1 strong external seta in addition to anterior hairs; hind coxa with 1 external seta. Femora without long hairs. Fore leg simple; fore tibia with 2 posterodorsal, 1 anterodorsal fine setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 29: 50: 50: 27: 9: 7: 7: 6. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia (half broken) with 1 dorsal, 3 anterodorsal, 3 posterodorsal, several fine ventral setae. Hind femur with one subapical anterior seta. Hind tibia (half broken) with several anterodorsal, posterodorsal and fine ventral setae. Length ratio of mid coxa to femur to hind coxa to femur, 38: 65: 22: 75.

Wing hyaline, veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> and R<sub>4+5</sub> straight, slightly diverging at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 18: 11. M<sub>1+2</sub> and R<sub>4+5</sub> inconspicuously convergent, almost parallel. Crossvein *m-cu* straight, almost perpendicular to longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 15: 35. Posterior wing edge almost evenly convex, bearing about 10 elongate cilia in basal half of a distance between apices of CuA<sub>1</sub> and M<sub>1+2</sub>; the cilia approximately 1.5 times longer than ordinary hairs. Anal vein distinct, not reaching to wing margin; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres yellow.

Abdomen bluish-bronze-black, weakly pollinose, with black hairs and marginal setae. Postabdomen dark. 8<sup>th</sup> segment with several fine black cilia. Epandrium of moderate size, rounded, highest at middle, projected distoventrally. Hypandrium midventral, nearly 2/3 as long as epandrium. Aedeagus thin, without tooth. Foramen positioned in basal half of left lateral side. Epandrial lobe undeveloped; 1 short and 1 long epandrial setae raising at base of surstyli. Surstylus bilobate; ventral lobe reduced, with several setulae; dorsal lobe of surstylus having broad base and narrow distal part, with 1 long apical seta. Postgonite as long as surstylus, narrow at base, strongly swollen distally, with short ventral beak. Cercus bilobate; ventral lobe longer than dorsal, with 2 strong apical and several weak and strong short setae in middle; dorsal lobe with apical dense brush of very long cilia nearly 2 times as long as epandrium.

Length (mm): body 2.1, antenna 0.8, wing 2.2/0.8, hypopygium (including cercal setae) 1.3.

*Distribution.* Guinea, Ivory Coast.

*Etymology.* The species is named for his relation to *H. lictor*.

*Diagnosis.* The new species is closely related to *H. lictor*, differing in morphology of hypopygium. Surstylus is longer and thinner; cercus bilobate, having long ventral lobe and brush of long cilia at apex of dorsal lobe.

**36. *Hercostomus rezniki* GRICHANOV, spec. nov.**

(Fig. 32)

*Holotype*, ♂, Cameroun, Yaounde-N'Kolbisson, 20.VII.1967, L. MATILE rec. / Museum Paris [NHMP].

*Paratypes*, 2♂♂, Côte d'Ivoire, Taï, 19-20.VIII.1978, G. COUTURIER leg. / Forêt dense, Sempervirente [NHMP].

*Description*. Male. General coloration of body dark, metallic greenish-blue or violet. Frons metallic blue-green, weakly pollinose; face black, densely grey pollinose. One long and strong vertical at the top of head, one short post-vertical, a pair of long and strong ocellar setae present. Lower postocular setae black. Eyes with microscopic hairs; face glabrous. Face as elongate triangle under antennae, turning into narrow strip below middle; ratio of its maximal width to minimal width to height 10: 2: 25; clypeus slightly wider than epistome at suture, not reaching lower margin of eyes. Antenna 1/5-2/5 longer than height of head, mostly black, brown at base of stylus; scape small, with several dorsal setulae; pedicel high, internally convex anteriorly, with short setulae; postpedicel long and high, asymmetric, concave dorsally, convex ventrally, acute apicodorsally, 1.5-2 times longer than high, microscopically pubescent; stylus positioned at basal 1/3 of dorsal side, black, pubescent, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 9: 5: 20: 48. Palpus and proboscis small, brown, with short hairs; palpus with 1 short black seta.

Thorax dark; mesonotum metallic greenish blue, pollinose; pleura bronze-black to brown-black, with bluish reflection, grey pollinose; humeri sometimes brown. 5 strong dorsocentral setae decreasing in size anteriorly with several hairs in front of the 1<sup>st</sup> pair; 2 rows of short acrostichals; 2 strong notopleural, 1 strong and 1 fine humeral setae present. Proepisternum with 1 strong black seta and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs bicolorate; all coxae brown with yellow apex; fore and mid femora brown, yellow at distal apex, or entirely yellow; hind femur dark-brown in distal 3/4 or entirely black; all tibia and tarsi yellow; apical segments of tarsi slightly darkened. Fore coxa with black hairs and several setae in apical half; mid coxa with 1 strong external seta in addition to anterior hairs; hind coxa with 1 external seta. Femora without long hairs. Fore tibia slightly but distinctly thickened in middle or basal half, with 1-2 posterodorsal, 1 anterodorsal fine setae, anterodorsal row of strong elongate setulae in distal half, 1-2 short apical setae. Fore tarsus with somewhat elongate dorsal setulae and ventral hairs; 5<sup>th</sup> segment slightly swollen; with enlarged claws and dorsoapical projection, longer in holotype (2/3 length of the segment) than in paratypes. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 36: 66: 67: 35:

13: 11: 8: 7. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 1 dorsal, 2-3 anterodorsal, 2-3 posterodorsal, 4-6 fine ventral and 5 apical setae. Mid tarsus simple. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 45: 87: 95: 41: 25: 19: 13: 8. Hind femur with one subapical anterior seta. Hind tibia with 3 anterodorsal, 3 posterodorsal, 4-6 fine ventral, 3-4 apical setae. Hind basitarsus with 1 short basoventral seta; 2<sup>nd</sup>-5<sup>th</sup> segments simple. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 27: 95: 112: 31: 38: 21: 14: 9.

Wing almost hyaline, veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> and R<sub>4+5</sub> straight, slightly diverging at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 26: 15. M<sub>1+2</sub> and R<sub>4+5</sub> inconspicuously convergent, almost parallel. Crossvein *m-cu* straight, almost perpendicular to longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 16: 38. Posterior wing edge almost evenly convex, with or without slightly elongate marginal hairs in proximal half of a distance between CuA<sub>1</sub> and M<sub>1+2</sub>. Anal vein distinct, not reaching to wing margin; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halter with yellow stem and brown knob.

Abdomen bluish-bronze-black, weakly pollinose, with black hairs and marginal setae. Postabdomen black-brown, appendages brownish-yellow, cercus reddish-yellow. Epandrium of moderate size, subtriangular, highest at middle, narrowed distad. Hypandrium positioned at basal 1/3, 2/3 as long as epandrium, with dorsal tooth. Aedeagus thin, with subapical dorsal tooth. Foramen positioned in basal half of left lateral side. Epandrial lobe undeveloped; 1 long epandrial seta raising at base of surstyli. Surstylus bilobate, with short setulae; ventral lobe half as long as dorsal one. Postgonite longer than surstylus, narrow, curved ventrad. Cercus stick-shaped, with strong setae and fine cilia at base and at apex, glabrous in middle.

Length (mm): body without antennae 2.1-2.4, antenna 0.8-0.9, wing 2.1-2.6/0.8, hypopygium 0.7-0.9.

*Distribution*. Cameroon, Ivory Coast.

*Etymology*. The species is named for the Russian entomologist, Dr. S.Ya. Reznik.

*Diagnosis*. The new species is close to *H. krivokhatskii*, differing in cercus covered with hairs distinctly longer than width of cercus; surstylus relatively narrow, half as long as cercus; hypandrium with dorsal tooth; aedeagus with subapical dorsal tooth.

**37. *Hercostomus straeleni* VANSCHUYTBROECK**

*Type material examined*. Holotype, ♂ [red label], Congo belge: Ruanda, Ilega (pied volc. Karisimbi), 2400 m, 24.III.1935, G.F. DE WITTE: 1314 / Coll. Mus. Congo, Ex coll. I.P.N.C.B. / P. VANSCHUYTBROECK det. 19?? *Hercosto-*

*mus* ♂ *straeleni* n.sp. [RMCA]

*Material examined.* 1♂, Uganda, S.W. Ichuya Forest, Canaba Gap, 2500 m, 28.XII.1995, I. YAROM & A. FREIDBERG [TAU].

*Diagnosis.* Face silvery white. Antenna black. Lower postocular setae white. Fore coxa yellow. Femora and tibia yellow; basitarsi yellow except extreme apex. Hind basitarsus without dorsal setae. Three apical segments of hind tarsus short, flat, widened; 3<sup>rd</sup> and 4<sup>th</sup> with long dense setae; 5<sup>th</sup> segment of the same tarsus covered anteriorly with silvery-white short hairs; mid tarsus simple. Lower calypter with black cilia. Cercus subtriangular, large, half as long as epandrium, with several falcate setae at distal apex.

*Distribution.* Congo (Kinshasa); Uganda.

### 38. *Hercostomus strictilamellatus* PARENT

*Type material examined.* Holotype, ♂, Congo Belge: Eala, III.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 / *Hercostomus strictilamellatus* n.sp. O. PARENT / Type [red label] / cf. Bull. Mus. Hist. Nat. Belg. XIII-18 (1937), p. 2, pl. 1, fig. 6, 7, 8, 9 [ISNB]; paratypes, 29 ♂♂ and 125 ♀♀, same labels (III-IV.1936), with additional red label "paratype".

*Diagnosis.* *H. strictilamellatus* together with several other species form a group of closely related species differing from other species of *Hercostomus* in the following characters. Legs usually simple, sometimes (*H. strictilamellatus*) fore tibia and apical segments of fore tarsus slightly swollen; legs mostly yellow, hind femur blackish or brown at least in apical half; mid and hind tibiae without strong ventral setae;  $R_{4+5}$  and  $M_{1+2}$  parallel or slightly converging in distal part; male postpedicel usually securiform, with basodorsal stylus; stylus distinctly pubescent; male cercus narrow, often ornamented with processes or bunches of long cilia. *H. strictilamellatus* males differ well in modified fore legs and bifurcated cercus.

*Distribution.* Congo (Kinshasa).

### 39. *Hercostomus transitorius* PARENT

*Type material examined.* Holotype, ♀, Zinti (Mayumbe), 14.IV.1926, A. COLLART / Congo Belge / R. Mus. Hist. Nat. Belg. I.G. 10.217 / *Hercostomus transitorius* n.sp. ♀, Type, O. PARENT det., 1934 / Type [red label] / cf. Bul. M.R.H.N.B. T.X., n.33 (1934), pp. 1-2, fig. 1-2.

*Diagnosis.* *H. transitorius* is included into *H. strictilamellatus* group of species, being most closely related to *H. lictor* PARENT, and the two species are possible synonyms. Antenna mostly yellow; postpedicel dark in apical half; stylus pubescent. Face half as wide as height of postpedicel. Ratio of length to height of postpedicel, 23: 21. Legs mostly yellow; fore coxa dirty yellow; other

coxae mostly brown-black; hind femur black except basal 1/5 or 1/6; hind basitarsus yellow. Mid tibia with 2 strong and 1 fine anterodorsal, 1 strong dorsal, 1 strong and 1 fine posterodorsal and 5 fine ventral setae. Hind tibia with 3 or 4 anterodorsal, 3 or 4 posterodorsal, 8 fine ventral setae; hind basitarsus with elongate ventral setulae. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 90: 85: 48: 16: 15: 10: 11. Same ratio for mid leg, 105: 138: 55: 35: 25: 20: 13. Hind tarsomeres 2-5 absent in holotype. Size 2.25 mm.

*Remark.* 1 ♀ from Madagascar determined by P. VANSCHUYTBROECK as *H. transitorius* (RMCA, examined) belongs to *Tachytrechus* sp. So, the species should be excluded from the fauna of the island.

*Distribution.* Congo (Kinshasa).

### 40. *Hercostomus ultimus* PARENT

*Type material examined.* ♂, holotype [red label] / Musée du Congo, N. Kivu, X-1933, Kibati, plaine de lave, Dr. De WULF / R.Det. G 2966 / *Hercostomus ultimus* n.sp. ♂, Type, O. PARENT [RMCA].

*Material examined.* 1♂, Kenya, 30 km N Kakamega (forest), 23.XI.1986, A. FREIDBERG [TAU]; 1♂, Kenya, W Kakamega, #73, Kakamega Forest Reserve, 00°22' N, 34°53' E, 1620 m, Date: 24.XI.1992, A. WHITTINGTON & J. LONDT, Indigenous forest paths [NMP]; 1♀, Coll. Mus. Congo, N. Lac Kivu: Rwankwi, 15.II.1952, J.V. LEROY [RMCA].

*Diagnosis.* *H. ultimus* is included into the group of species having silvery-white segments of hind tarsi. Hind basitarsus with 1 or 2 remarkable dorsal setae; hind tarsus without ornamentation except silvery 5<sup>th</sup> tarsomere.  $M_{1+2}$  straight,  $M_{1+2}$  and  $R_{4+5}$  inconspicuously convergent. Hind basitarsus absent in holotype. Cercus yellow, with yellow cilia, without falcate setae. Female differs from *H. congoensis* in presence of 1 strong anteroventral and 2 short posteroventral setae on mid tibia and 1 short dorsal seta on mid basitarsus.

*Distribution.* Congo (Kinshasa), Kenya.

### Genus *Lichtwardtia* ENDERLEIN

The genus *Lichtwardtia* ENDERLEIN has Palaeotropical area with two Oriental and Australasian and 16 (including new) Afrotropical species. Species of *Lichtwardtia* differ from the related genera of the subfamily Dolichopodinae in the complex of characters such as follows: one strong anterior subapical seta is present on the middle and hind femora; the face is slightly narrowed at upper third and somewhat widened towards clypeus; wing vein  $M_{1+2}$  is broken in middle of distal part, joining costal vein just before wing tip, having anteroproximal (basal part of  $M_1$ ) and posterodistal ( $M_2$ ) stublike veins;  $R_{4+5}$  and distal part of  $M_1$  are nearly parallel; antennal stylus is long pubescent.

#### 41. *Lichtwardtia angularis* (MACQUART)

*Type material examined.* Lectotype [here designated], ♂, Nr. 1046, *Dolichopus angularis* [on pin] / Senegal, GUÉRIN [on pin] / *D. angularis* MACQ. Mr. GUÉRIN, Senegal, 896 [separate label] [MNHP]; holotypus, ♂ [red label] / S.L. Edouard: Kitembo (925 m), 4.IV.36, L. LIPPENS - 60, Parc Nat. Albert / Coll. Mus. Congo (ex coll. I.P.N.C.B.) / Type [red label] / P. VANSCHUYTBROECK det. 1950, *Vaalimymia antennata* n.sp. [RMCA]; ♀, Kinshasa, WAELBROECK, 25.5.1899 / *Rhagioneurus metallicus* n.sp. / M. Bezzi - 1908 det. *Rhagioneurus metallicus* / Type [red label; ISNB].

*Material examined.* 1♂, 2♀♀, Äthiopien, Lake Tana, Bahor Dar, SCHÄUFFELE leg.; Äthiopien, Bahor Dar (Licht), 15-25.10.1967, H. SCHÜZ leg. [SMFD]; 2♂♂, 1♀, Ethiopia, Awash Nat. Res., 30.XII.1971, A. FREIDBERG; 1♂, 1♀, Ethiopia, Sidamo Nechisar National Park, Hot Springs, 1400 m, 8.II.2000, A. FREIDBERG & I. YAROM [TAU]; 3♂♂, 2♀♀, S. Africa, Natal, #5G, Urgeni [?] Valley N.R., Date: 26/3/1994, Coll.: C.R. CRADOCK; S. Africa, N. Transvaal, Entabeni For. Station, Zoutpansberg Range, Jan. 1975, STUCKENBERG, forest stream, 2230CC; RSA: KZ-Natal, #89, Cathedral Peak, 28°57' S, 29°12' E, 3075 m, Date: 4.XII.1994, Coll.: D.A. BARRACLOUGH; So. Africa: Natal, a. 60 m, Charters Creek camp, St. Lucia G. Res., 2832Ab, 23.I.1980, seepage area, R. MILLER & P. STABBINS; 1♀, Kenya: Baringo, #62, Marigat, Marigat Inn, 00°27' N, 35°59' E, 1040 m, Date: 20.XI.1992, J. LONDT & A. WHITTINGTON, At domestic lights; 1♀, S. Africa: Transvaal, Entabeni For. Station, Zoutpansberg Range, Jan. 1975, STUCKENBERG, grassland, 2230CC; South Africa: Natal, Makaheli For., 2632DD, ca. 5 km NE Mangusi, 30.XI-2.XII.1982, BARRACLOUGH, LONDT & STUCKENBERG, Forest; 1♂, Shilouvane, Ztb. Distr., Oct. 1901, Rev. H.A. JUNOD [NMP]; 1154♂♀, Congo Belge: P.N.G. Miss H. DE SAEGER, 1.III.1950, 15.V.1950, 18.IX.1950, 26.VIII.1950, 15.IX.1950, 27.IX.1950, 13.X.1950, 20.X.1950, 24.I.1951, 6.II.1951, 9.II.1951, 19.II.1951, 23.II.1951, 28.II.1951, 1.III.1951, 6.III.1951, 14.III.1951, 31.III.1951, 6.IV.1951, 8.IV.1951, 10.IV.1951, 4.V.1951, 5.V.1951, 22.V.1951, 25.V.1951, 26.V.1951, 28.V.1951, 31.V.1951, 4.VI.1951, 8.VI.1951, 27.VI.1951, 3.VII.1951, 12.VII.1951, 21.VII.1951, 25.VII.1951, 27.VII.1951, 28.VII.1951, 7.VIII.1951, 9.VIII.1951, 10.VIII.1951, 14.VIII.1951, 16.VIII.1951, 17.VIII.1951, 21.VIII.1951, 23.VIII.1951, 25.VIII.1951, 3.IX.1951, 7.IX.1951, 10.IX.1951, 11.IX.1951, 12.IX.1951, 14.IX.1951, 20.IX.1951, 26.IX.1951, 28.IX.1951, 3.X.1951, 5.X.1951, 6.X.1951, 16.X.1951, 20.X.1951, 21.XI.1951, 29.X.1951, 30.X.1951, 31.X.1951, 11.XI.1951, 12.XI.1951, 13.XI.1951, 17.XI.1951, 19.XI.1951, 21.XI.1951, 8.XII.1951, 17.XII.1951, 28.XII.1951, 18.I.1952, 31.I.1952, 19.II.1952, 27.II.1952, 10.III.1952, 11.III.1952, 26.III.1952, 2.IV.1952, 10.IV.1952, 24.IV.1952, 29.IV.1952, 5.V.1952, 6.V.1952, 8.V.1952,

30.V.1952, 16.VI.1952, 20.VI.1952, 25.VI.1952, 4.VII.1952, 10.VII.1952, 14.VII.1952, 15.VII.1952, 22.VII.1952, 24.VII.1952, 25.VII.1952, 28.VII.1952, 29.VII.1952, 30.VII.1952, 4.VIII.1952, 5.VIII.1952, 8.VIII.1952, 14.VIII.1952, 16.VIII.1952, 18.VIII.1952, 19.VIII.1952, 22.VIII.1952, 25.VIII.1952, 1.IX.1952, 2.IX.1952, 4.IX.1952, 9.IX.1952, 10.IX.1952, 16.IX.1952, 23.IX.1952, 24.IX.1952, 25.IX.1952, 26.IX.1952, 27.IX.1952, 29.IX.1952, H. DE SAEGER [RMCA]; 1♂, I.R.S.A.C., Mus. Congo, Kivu, Kavimvira (Uvira), (à la lumière), II/III-1955, G. MARLIER; 1♀, Coll. Mus. Congo, Elisabethville (à la lumière), XI-1950, Ch. SEYDEL [RMCA]; 6♂♂, S. L. Edouard: r. Rwindi (1000 m), 9.II.1936, L. LIPPENS, Parc Nat. Albert, 4 / P. VANSCHUYTBROECK det. 1951, *Vaalimymia metallica* (Bezzi), *Vaalimymia microlepis* PARENT [ISNB]; 1♂, Congo belge: PNA, May ya Moto, 950 m, 10.XI.1934, G.F. de WITTE, 734 / P. VANSCHUYTBROECK det. 1951, *Vaalimymia nigrotorquata* PARENT [ISNB]; 1♂, Congo Belge: PNA, 19.VII.1954, P. VANSCHUYTBROECK & H. SYNAVE, 9204 / Massif Ruwenzori, Litongo, 1575 m [ISNB]; 1♂, Congo belge: PNA, Katanda, 950 m, 30.XI.1934, G.F. de WITTE, 856 / P. VANSCHUYTBROECK det. 1951, *Vaalimymia microlepis* PARENT [ISNB]; 13♂♂, Congo belge: PNU, Kankunda affl. G. Lupiala (1300 m), 22-28.XI.1947, Mukana (1810 m), 15.III.1948, Miss. G.F. DE WITTE, 1032a, 1387a / P. VANSCHUYTBROECK det. 1952, *Vaalimymia violacea* CURRAN, *Vaalimymia aethiopica* MACQ. [ISNB]; 1♂, Tanzania, Lake Malawi, Matema, 1.VII.1979, M. STOLTZE leg. [ZMC]; 1♀, C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise 4, 22.II.1998, leg. KASSEBEER & HILGER [ZIUK]; 2♂♂, 1♀, C.I., Tai, Reisfelder am Cavalla, 18.II.1998, 5°21' N, 7°26' W, leg. KASSEBEER & HILGER [ZIUK].

*Diagnosis.* *L. angularis* is quite distinct in wing clearly maculated at M<sub>2</sub> and *m-cu*; postpedicel usually 1.5-2 times longer than high, with drawn-out or acute apex; hind tarsus usually entirely black; postgonite broad and rounded at apex; cercus rounded or oval, without distinct apex distodorsally. It has greatly variable colour of legs (from mostly yellow to mostly blackish-brown) and wings, shape and length of the postpedicel. The shape of cercus and apex of hypandrium is also variable to a certain extent. [See Fig 10 (nec 1) in GRICHANOV, 1998].

*Distribution.* Senegal; Gambia, Ivory Coast (!), Nigeria, Gabon, Ethiopia (!), Uganda, Kenya, Tanzania, Congo (Kinshasa), Zambia, South Africa, Swaziland, Mozambique, Botswana, Namibia.

#### 42. *Lichtwardtia angulicornis* GRICHANOV, spec. nov.

(Figs. 33-35)

*Holotype*, ♂, Côte d'Ivoire, Taï, 19-20.VIII.1978, G. COUTURIER leg. / Forêt dense, Sempervirente [NHMP].

*Description.* Male. Frons metallic black-violet; face densely white pollinose, slightly shining blue under antennae, with black ground colour. One

strong and long vertical, one short postvertical, a pair of strong ocellar setae present. Lower postocular setae entirely black; ventral postcranium with several sparse black cilia. Eyes with microscopic hairs; face glabrous. Face almost parallel-sided; ratio of its minimal width to height 17: 45; clypeus not reaching lower margin of eyes, convex downward. Antenna mostly brown, pedicel and postpedicel at base reddish; postpedicel 2 times as long as high, subtriangular, with long drawn-out apex and short hairs; stylus positioned at basal 1/5, black, pubescent, with hairs 2-4 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 10: 8: 25. Palpus and proboscis small, brown, with short dark hairs; palpus with 1 black seta.

Mesonotum metallic greenish-blue, weakly pollinose; pleura black, whitish pollinose. 5 strong dorsocentral setae gradually decreasing anteriorly with several microscopic hairs in front of the 1<sup>st</sup> pair, 1(?) or 2 irregular rows of acrostichals in anterior half of mesonotum. Proepisternum with 1 strong black seta and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; mid and hind coxa brown with yellow apex, apical segments of tarsi brown. Femora without long hairs. Fore coxa with black hairs and several apical setae. Fore tibia with short setae: 1 anterodorsal, 1 posterodorsal, 1 posterior and 3 apical setae; posterior seta shorter than diameter of tibia. Fore tarsus simple, fore basitarsus with short basoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 66: 69: 35: 14: 12: 8: 8. Mid femur with 1 subapical anterior seta. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments first and second), 43: 80: 96: 48: 24. Hind femur with one subapical anterior seta. Hind tibia with 2 anterodorsal, 3 posterodorsal, 2 short ventral, 3 apical setae. Hind tarsus simple. Hind basitarsus with short setae: 1 basoventral, 1 apicoventral and 0 (left) - 1 (right leg) very short middorsal setae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 28: 87: 111: 38: 39: 23: 15: 10.

Wing evenly greyish, without spots. Costa simple. R<sub>1</sub> reaching to first third of wing. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight, parallel in apical half. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 20: 13. M<sub>1+2</sub> broken in middle of distal part, joining costal vein at wing tip, with anteroproximal (basal part of M<sub>1</sub>) and posterodistal (M<sub>2</sub>) stublike veins 1-2 times as long as *m-m*. R<sub>4+5</sub> and distal part of M<sub>1</sub> parallel. Crossvein *m-m* straight, *m-cu* slightly convex, both perpendicular to corresponding longitudinal veins. Ratio of distal part of M<sub>1</sub> to *m-m* to distal part of M<sub>1+2</sub> to *m-cu* to distal part of CuA<sub>1</sub>, 75: 7: 30: 28: 32. Anal vein distinct, not reaching to wing margin; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres brownish.

Abdomen green-black, whitish pollinose, with black hairs and marginal setae. 8<sup>th</sup> segment black, with short sparse black hairs. Epandrium brown-black, small, as long as 4<sup>th</sup> and 5<sup>th</sup> tergites combined, elongate, slightly swollen ba-

sally, narrowed in distal half, twice longer than high, with slightly concave ventral margin (lateral view) and broad apicoventral projection. Hypandrium dark-brown, basoventral, 2/3 as long as epandrium, curved ventral at apex. Aedeagus simple. One small epandrial seta at base of hypandrium; another strong seta positioned just before epandrial lobe. Epandrial lobe entirely fused to epandrium, with 3 strong setae. Surstylus dark-yellow, bilobate; ventral lobe digitiform, short, with several apical and dorsal short setae; dorsal lobe of surstylus broad, twice larger than ventral, 1/3 as long as cercus, with 2-3 small distal projections as figured, and several short distal setae. Postgonite narrow, as long as surstylus. Cercus light-brown, broadly black along margins, elongate, 2/5 as long as epandrium, 1.8 times longer than wide, with acute distodorsal apex and straight and curved black cilia half as long as width of cercus.

Female unknown.

Length (mm): body 2.8, antenna 0.9, wing 3.2/1.2, hypopygium 0.9.

*Distribution.* Ivory Coast.

*Etymology.* The Latin name of the species belongs to drawn-out apex of postpedicel [(Lat. *angulus, cornu*) 'with angular antennae'].

*Diagnosis.* The new species is close to *L. nigrifacies*, differing in almost entirely white pollinose face, metallic under antennae only, and simple hypandrium and aedeagus; lower postocular setae entirely black; femora and tibiae entirely yellow; dorsal seta greatly reduced on hind basitarsus; wing costa simple.

### 43. *Lichtwardtia clypeata* GRICHANOV, spec. nov.

(Fig. 36)

*Holotype*, ♂, [Ivory Coast:] Ass-Jaunes, GFB-Q, 3.IV.1971 [NHMP].

*Description.* Male. Head depressed of shrinkage. Frons metallic-blue, weakly pollinose; face densely silvery-white pollinose, clypeus with yellow ground colour. One strong vertical, one short postvertical, a pair of strong ocellar setae present. Upper postocular setae black; lower postoculars white; ventral postcranium with white cilia. Eyes with microscopic hairs; face glabrous. Face narrowest at upper 1/4, greatly widening towards palpi; ratio of its height to minimal width of epistome to maximal width of clypeus, 50: 5: 16; clypeus flat, bulging, 2/3 length of epistome, reaching lower margin of eyes, convex downward. Antenna as long as height of head, mostly yellow-orange; postpedicel black in distal half, subtriangular, as long as high, right-angular apicodorsally, with short hairs; stylus middorsal, black, sparsely pubescent, with hairs 2-4 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 9: 6: 11: 47. Palpus yellow, elongate, with short hairs and 1 short black seta; proboscis yellow-brownish, with short dark hairs.

Mesonotum metallic greenish-violet, weakly pollinose; pleura bluish-black, whitish pollinose, with brownish sutures. 5 strong dorsocentral setae

gradually decreasing anteriorly with several hairs in front of the 1<sup>st</sup> pair, 1-2 irregular rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; fore and hind coxae yellow, mid coxa brown externally, apical segments of mid and hind tarsi brownish. Femora without long hairs. Fore coxa with black hairs and several long apical setae. Fore tibia with 1 strong and 1 fine anterodorsal, 1 strong and 1 fine posterodorsal, 1 very short posteroventral, 3 apical setae. Fore tarsus simple, fore basitarsus with short basoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 71: 70: 36: 15: 11: 8: 10. Mid femur with 1 subapical anterior seta. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. 1<sup>st</sup> to 4<sup>th</sup> segments of mid tarsus each with elongate apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 45: 94: 97: 52: 25: 20: 15: 10. Hind femur with one anterodorsal seta at 4/5 or 3/4. Hind tibia with 3 anterodorsal, 2 posterodorsal, 1 subapical dorsal, 2 short ventral, 2-3 apical setae. Hind basitarsus with 1 basoventral, 2-3 ventral, 1-2 apical short setae, 1 strong middorsal seta; 2<sup>nd</sup>-3<sup>rd</sup> segments with elongate apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 26: 97: 115: 37: 44: 25: 16: 11.

Wing evenly brownish. Costa with long wide thickening beginning just before R<sub>1</sub> and gradually narrowing towards first 1/3 of 2<sup>nd</sup> radial cell. R<sub>1</sub> reaching to first third of wing. R<sub>2+3</sub> and R<sub>4+5</sub> straight, slightly divergent at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 24: 18. M<sub>1+2</sub> broken in middle of distal part, joining costal vein just before wing tip, with anteroproximal (basal part of M<sub>1</sub>) and posterodistal (M<sub>2</sub>) stublike veins equal in length to *m-m*. R<sub>4+5</sub> and distal part of M<sub>1</sub> parallel. Crossveins *m-m* and *m-cu* straight, almost perpendicular to corresponding longitudinal veins. Ratio of distal part of M<sub>1</sub> to *m-m* to distal part of M<sub>1+2</sub> to *m-cu* to distal part of CuA<sub>1</sub>, 64: 8: 31: 20: 23. Anal vein distinct, almost reaching to wing margin; anal lobe well developed; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen metallic bronze-blue-black, grey pollinose, with black hairs and marginal setae. 8<sup>th</sup> segment black, with sparse black hairs; 7<sup>th</sup> segment yellow-brown, bare. Epandrium elongate, 1/5 longer than 4<sup>th</sup> and 5<sup>th</sup> tergites combined, twice longer than high, slightly narrowed distad, black-brown. Hypandrium brown, basoventral, 2/3 as long as epandrium, with apical dorsal hook. Aedeagus thin and long, with 3 dorsal dents positioned not far before apex. One small epandrial seta at base of hypandrium; 1 short epandrial seta positioned just before apicoventral angle. Epandrial lobe concealed, weakly developed, bearing 3 setae. Surstylus yellow, bilobate; ventral lobe broad, suboval, widely rounded at apex, with several short thick and simple setae; dorsal lobe of surstylus broad, longer than ventral, more than half as long as cercus, with 2 api-

coventral short processes as figured, and several setulae distally. Postgonite long, narrow, nearly as long as surstylus. Cercus yellow, black along distal margin, rounded, with indistinct distodorsal apex having 4 blunt flat setae and numerous cilia shorter than diameter of cercus.

Female unknown.

Length (mm): body 2.8, antenna 0.8, wing 3.2, hypopygium 1.0.

*Distribution.* Ivory Coast.

*Etymology.* The Latin name of the species belongs to unusual clypeus.

*Diagnosis.* The new species keys out to *L. fractinervis*, differing in costa having long stigma at R<sub>1</sub>, face being 10 times higher than its minimal width and cercus having several blunt flat setae at apex.

#### 44. *Lichtwardtia fractinervis* (PARENT)

*Type material examined.* Holotypus ♂ [red label] / Congo belge: Uele, Monga, 450 m, 18.IV au 8.V.1935, G.F. DE WITTE: 1335 / Coll. Mus. Congo (ex coll. I.P.N.C.B.) / Type [red label] / P. VANSCHUYTBROECK det. 1950, *Vaalimya minuta* n.sp. [RMCA]; Holotypus ♀ [red label] / Congo belge: Kivu, Rutshuru, 1285 m, 22.V au 4.VI.1934, G.F. DE WITTE: 427 / Coll. Mus. Congo (ex coll. I.P.N.C.B.) / Type [red label] / P. VANSCHUYTBROECK det. 1950, *Vaalimya kivuensis* n.sp. [RMCA].

*Material examined.* 328 ♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 12.IV.1950, 14.VI.1950, 23.IV.1951, 1.VI.1951, 5.VII.1951, 9.VII.1951, 28.VII.1951, 3.VIII.1951, 6.VIII.1951, 8.VIII.1951, 16.VIII.1951, 1.IX.1951, 17.IX.1951, 19.XI.1951, 21.XI.1951, 24.IX.1951, 26.IX.1951, 28.IX.1951, 5.X.1951, 12.X.1951, 15.X.1951, 19.X.1951, 20.X.1951, 28.X.1951, 29.X.1951, 12.XII.1951, 13.XII.1951, 20.III.1952, 2.IV.1952, 8.IV.1952, 23.IV.1952, 29.IV.1952, 30.IV.1952, 3.V.1952, 6.V.1952, 7.V.1952, 8.V.1952, 22.V.1952, 30.V.1952, 10.VI.1952, 24.VI.1952, 26.VI.1952, 28.VI.1952, 30.IV.1952, 21.V.1952, 22.V.1952, 2.VII.1952, 7.VII.1952, 9.VII.1952, 10.VII.1952, 11.VII.1952, 15.VII.1952, 16.VII.1952, 23.VII.1952, 28.VII.1952, 29.VII.1952, 4.VIII.1952, 8.VIII.1952, 16.VIII.1952, 22.VIII.1952, 30.VIII.1952, 1.IX.1952, 2.IX.1952, 4.IX.1952, 9.IX.1952, 10.IX.1952, 16.IX.1952, 27.IX.1952, 29.IX.1952, 2.IX.1952, H. DE SAEGER [RMCA]; 1♂, Congo Belge, P.N.U., Lusinga (1760 m), 15.III.1947, G.F. DE WITTE: 50a; 1♂, Coll. Mus. Congo, Bafwasende: Batama, 6.III.1946, Mr. FRANÇOIS [RMCA]; 1♂, Malawi: Ntchisi forest reserve, 1334Ac, 1500m, LONDT & STUCKENBERG, 3-4.XII.1980, Montane forest & woodland [NMP]; 1♂, Congo Belge: PNA, 16.VII.1954, P. VANSCHUYTBROECK & H. SYNAVE, 9191 / Secteur Nord, Mulingo, 1350 m, Secteur Kikula, Région Baniangala [ISNB]; ♂, Congo belge, Eala, XII.1934, J. GHESQUIERE / Reg. Mus. Hist. Nat. Belg. I.G. 10.482 [ISNB]; 1♂, 1♀ (in alcohol), Gabon: Ntoum, VIII.1984, A. PAULY, Piège Malaise, Pâturage, ISNB; 1♂, [Côte d'Ivoire], Marigot, salé, 16.III.1971 [NHMP];

1♂, Botswana: Serowe Farmer's brigade, SE 2226 BD, Mercury light trap, III.1990, Per FORCHHAMMER leg. [NHRS]; 2♂♀, C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise 4, 22.II.-3.III.1998, leg. KASSEBEER & HILGER [ZIUK]; 1♂, Tanganyika, E. Usambara Mt., Amani, 1200 m, 4.1962, leg. G. Heinrich [NHRS].

**Diagnosis.** *L. fractinervis* is characterised by the following characters. Face usually 3.5-4 times higher than wide, with yellowish-silvery or light-golden (rarely brownish) pollination; postpedicel as long as high, sometimes 1.5 times longer than high, rounded or right-angular apicodorsally; wing evenly greyish, with simple costa; fore tibia with one short, though strong posterior seta, slightly longer than diameter of tibia; hind basitarsus with 1 strong dorsal seta, half as long as basitarsus. Epandrium usually large; hypandrium with dorsal subapical tooth; apicoventral epandrial lobe digitiform, with 1 apical and 1 middorsal setae; ventral lobe of surstylus broad, with not very long basoventral seta and thick apical spine directed basad; postgonite narrow and pointed at apex; cercus regularly subtriangular [see Figs. 1, 9 and 11 (nec 10) in GRICHANOV, 1998].

**Distribution.** Benin; Ghana, Nigeria, Congo (Kinshasa), Uganda, Angola, Namibia, Malawi, Ivory Coast (!), Gabon (!), Botswana (!).

**45. *Lichtwardtia hilgerae* GRICHANOV, spec. nov.**  
(Fig. 37)

**Holotype**, ♂ [in alcohol], [Ivory Coast:] C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise, 22.II.-3.III.1998, leg. KASSEBEER & HILGER [ZIUK].

**Paratype**, ♂ [in alcohol], same label.

**Description.** Male. Frons metallic-blue; face with metallic-blue reflection under antenna and brownish clypeus. One strong vertical, one short postvertical, a pair of strong ocellar setae present. Upper postocular setae black; lower postocular white; ventral postcranium with sparse black and white cilia. Eyes with microscopic hairs; face glabrous. Face the narrowest at upper third, distinctly widening towards palpi; ratio of its minimal width to height 15: 55; clypeus reaching lower margin of eyes, convex downward. Antenna slightly shorter than height of head, yellow-brownish; postpedicel brown dorsally, subtriangular, as long as high, with indistinct apex and short hairs; stylus middorsal, black, sparsely pubescent, with hairs 3-5 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 6: 5: 12: 45. Palpus and proboscis small, yellow-brownish, with short black hairs; palpus having also 1 short seta.

Mesonotum metallic dark-blue-green; pleura green-black. 5 strong dorso-central setae gradually decreasing anteriorly with several hairlike setae in front of the 1<sup>st</sup> pair, 2 rows of acrostichals. Propleura with 1 strong black seta above

fore coxa and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; fore coxa yellow, mid coxa black, hind coxa brown, mid tibia blackened in distal 1/3; fore and mid tarsi black from tip of basitarsus, hind tarsus black except dirty yellow basal half of basitarsus. Femora without long hairs. Fore coxa with black hairs and several long apical setae. Fore tibia with 1 strong and 1 fine anterodorsal, 1 strong and 1 fine posterodorsal, 1 strong posteroventral and 3 apical setae. Fore tarsus simple, fore basitarsus with short basoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 43: 82: 76: 35: 15: 12: 10: 10. Mid femur with 1 subapical anterior seta. Mid tibia with 4 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. 1<sup>st</sup> to 4<sup>th</sup> segments of mid tarsus each with elongate apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 50: 97: 116: 49: 21: 18: 13: 12. Hind femur with one subapical anterior seta. Hind tibia with 4 antero-, 4 posterodorsal, 2 ventral, 2 apical setae. Hind basitarsus with 3 short ventral and 1 strong middorsal setae; 2<sup>nd</sup>-3<sup>rd</sup> segments with elongate apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 25: 100: 120: 50: 43: 29: 19: 15.

Wing evenly brownish. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> nearly straight, slightly divergent at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 28: 18. M<sub>1+2</sub> broken in middle of distal part, joining costal vein just before wing tip, with anteroproximal (basal part of M<sub>1</sub>) and posterodistal (M<sub>2</sub>) stublike veins 1/2 as long as or equal to *m-m*. R<sub>4+5</sub> and distal part of M<sub>1</sub> parallel. Crossveins *m-m* and *m-cu* almost perpendicular to corresponding longitudinal veins, *m-cu* slightly convex. Ratio of distal part of M<sub>1</sub> to *m-m* to distal part of M<sub>1+2</sub> to *m-cu* to distal part of CuA<sub>1</sub>, 63: 9: 32: 28: 28. Anal vein distinct, almost reaching to wing margin; anal lobe well developed; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen metallic blue-green, with black hairs and marginal setae. 7<sup>th</sup> segment not longer than 5<sup>th</sup> tergite and half as long as epandrium; 8<sup>th</sup> segment black, with sparse black hairs. Epandrium black, elongate, as long as 4<sup>th</sup> and 5<sup>th</sup> tergites combined, nearly twice longer than high, narrowed distad, with almost right-angular apicoventral angle. Hypandrium brown, basoventral, a little more than half as long as epandrium, narrow in distal half, with small apical dorsal tooth. Aedeagus thin and long, with small subapical dorsal tooth. One small epandrial seta at base of hypandrium; 1 very strong and 2 simple epandrial setae of equal length positioned just before apicoventral angle of epandrium. Epandrial lobe undeveloped. Surstylus yellow, bilobate; ventral lobe broad, widely rounded at apex, with 1 long basoventral seta, 3 apicoventral setulae, 3 curved distal setae of which distalmost one is the strongest; dorsal lobe of surstylus broad, longer than ventral, half as long as cercus, with apicoventral pointed projection and uneven distal margin as figured, 1 subapical ventral, 1 subapical dorsal and 2 strong dorsal setae. Postgonite nearly as long as surstylus, narrow



(lateral view), spoon-like (dorsal view). Cercus yellow, narrowly brown along distal and ventral margins, rounded ventrally, with distinct distodorsal apex and straight black cilia being not longer than diameter of cercus.

Female unknown.

Length (mm): body without antennae 4.2, antenna 0.9, wing-length 4.3, hypopygium 1.2.

*Distribution.* Ivory Coast.

*Etymology.* The species is named for one of the collectors, Dr. S. HILGER.

*Diagnosis.* The new species is closely related to *L. hollisi* and *L. tikhonovi*, differing in fine structures of hypopygium, blackened apex of hind tibia and shorter postpedicel.

#### 46. *Lichtwardtia hollisi* GRICHANOV

*Material examined.* 3 ♂♂, 1 ♀, Congo Belge: P.N.G. Miss H. DE SAEGER, II/id/9, 12.XI.1951 [PpK.8/9, 15.VII.1952; Aka/2, 22.V.1952,], H. DE SAEGER [RMCA].

*Diagnosis.* The species is characterised by the following characters. Face densely silvery-white pollinose; postpedicel 1.5 times longer than high; wing evenly greyish; fore tibia with one strong and long posterior seta, at least twice longer than diameter of tibia; hind basitarsus with 1 strong dorsal seta, half as long as basitarsus; hypandrium with dorsal subapical tooth; apicoventral epandrial lobe undeveloped, with epandrial setae raising from epandrium; ventral lobe of surstylus broad, with long basoventral seta and long thick apical spine directed basad; postgonite narrow and pointed at apex; cercus with distinct distodorsal apex.

*Distribution.* Kenya; Congo (Kinshasa) (!).

#### 47. *Lichtwardtia maculata* (PARENT)

(Fig. 38)

*Type material examined.* Holotypus, ♀ [red label] / Musée du Congo, Kanga: Kando, 4.IV.1931, G.F. DE WITTE / R. Det. 3092 / *Vaalimyia maculata* n.sp. Type. O. PARENT [RMCA]; holotypus, ♂ [red label] / Congo belge: Uele, Monga (riv. Bili), 450 m, 18.IV au 8.V.1935, G.F. DE WITTE: 1345 / Coll. Mus. Congo (ex coll. I.P.N.C.B.) / Type [red label] / P. VANSCHUYTBROECK det. 1950, *Vaalimyia wittei* n.sp. [RMCA].

*Material examined.* 6♂♂, 4♀♀, Congo Belge: P.N.G., Miss. H. DE SAEGER, 4.V.1951, 25.VI.1952, 14, 19.VIII.1952, 22.II.1952, H. DE SAEGER [RMCA].

*Description.* Male. Frons metallic-blue, brownish pollinose; face mostly silvery white pollinose; epistome metallic-green under antennae, with metallic-green longitudinal medial stripe, half as wide as epistome. One strong vertical,

one shorter postvertical, a pair of strong ocellar setae present. Lower postocular setae black; ventral postcranium with 1-2 black setae and several light cilia. Eyes with short hairs; face glabrous. Face almost parallel-sided, narrowest at upper third, slightly widening at clypeus; ratio of its minimal width to height 17: 37; clypeus not reaching lower margin of eyes, convex downward. Antenna mostly orange-yellow; pedicel brown dorsally; postpedicel brown dorsally and apically; scape with distinct inner acute apex; postpedicel 1.7 times longer than high, with acute apex. Length ratio of scape to pedicel to postpedicel to stylus, 15: 8: 19: 42. Palpus and proboscis small, brown, with short black hairs; palpus with 1 short seta.

Mesonotum black-violet, densely brownish pollinose between rows of dorsocentral setae; pleura greenish-black, whitish pollinose. 5 strong dorsocentral setae with several microscopic hairs in front of the 1<sup>st</sup> pair, 2 rows of short acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; fore coxa yellow, mid and hind coxae brown; hind tibia brown at extreme apex; all tarsi black from tip of basitarsus. Femora without long hairs. Fore coxa with black hairs and several long apical setae. Fore tibia with 1 anterodorsal and 1 dorsal strong setae, 1 posterior seta slightly longer than diameter of tibia, 3 strong apical setae. Fore tarsus simple, fore basitarsus with short basoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 40: 61: 59: 26: 15: 11: 9: 9. Mid femur with 1 subapical anterior seta. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. Mid tarsus simple. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 35: 78: 82: 39: 20: 16: 12: 9. Hind femur with one anterodorsal seta at 3/4. Hind tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral, 3 apical setae. Hind basitarsus with 1 basoventral, 1 apical short setae, 1 strong middorsal seta, 1/2 length of basitarsus; 2<sup>nd</sup>-4<sup>th</sup> segments each with elongate apicoventral setula. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fourth), 25: 83: 103: 30: 38: 25: 18.

Wing half hyaline, with broad greyish limb along margins and greyish spots at *m-m* and *m-cu*. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> straight and parallel. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 22: 23. M<sub>1+2</sub> broken in middle of distal part, joining costal vein at wing tip, with anteroproximal (basal part of M<sub>1</sub>) and posterodistal (M<sub>2</sub>) stublike veins 1/3-4/5 as long as *m-m*. Distal part of M<sub>1+2</sub> (from *m-m* to *m-cu*) slightly sinuate. R<sub>4+5</sub> and distal part of M<sub>1</sub> slightly divergent at apex. Crossveins *m-m* and *m-cu* almost straight, almost perpendicular to corresponding longitudinal veins. Ratio of distal part of M<sub>1</sub> to *m-m* to distal part of M<sub>1+2</sub> to *m-cu* to distal part of CuA<sub>1</sub>, 52: 10: 32: 26: 27. Anal vein distinct, almost reaching to wing margin; anal lobe well developed; anal angle obtuse. Lower calypter brown, with black setae. Halteres brown.

Abdomen metallic bronze-black, grey pollinose, with black hairs and marginal setae. 8<sup>th</sup> segment black, with sparse black hairs. Epandrium black,

small, slightly longer than 4-5<sup>th</sup> tergites combined, nearly twice longer than high, slightly narrowed distad, with almost right-angular apicoventral angle. Hypandrium brown, basoventral, half as long as epandrium, with large subapical dorsal tooth. Aedeagus thin and long, with dorsal tooth positioned not far before apex. One small epandrial seta at middle of ventral side of epandrium; 3 strong setae raising from apicoventral angle of epandrium. Epandrial lobe undeveloped. Surstylus yellow, bilobate; ventral lobe broad, rounded at apex, with thick spine and several simple short setae; dorsal lobe of surstylus broad, longer than ventral, half as long as cercus, with apicoventral and apicodorsal pointed projections and shallow distal emargination as figured and several short setae. Postgonite reduced, invisible. Cercus mostly light brown, widely black along margin, rounded-triangular, with distinct distodorsal apex and straight black cilia not longer than diameter of cercus.

Length (mm): body 2.6-3.0, antenna 0.8, wing 2.6/1.0, hypopygium 0.9.

*Distribution.* Congo (Kinshasa).

*Diagnosis.* *L. maculata* is close to *L. nigrotorquata*, differing in the following characters. Wing with wide grey limb along margins, maculated at M<sub>2</sub> and *m-cu*; epistome weakly pollinose, metallic green under antennae, with broad metallic longitudinal stripe in middle; male postpedicel 1.5-2 times longer than high; CuA<sub>1</sub> as long as *m-cu*; face 2-3 times higher than wide; hypandrium with dorsal tooth; postgonite greatly reduced, concealed. The species was erroneously placed in synonymy to *L. angularis* by GRICHANOV (1998).

#### 48. *Lichtwardtia nigrifacies* GRICHANOV, spec. nov.

(Fig. 39)

*Holotype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/me/10, 12.XI.1951, H. DE SAEGER, 2744 [RMCA].

*Description.* Male. Frons metallic-blue, brownish pollinose; face with mat-black (anterior view), brownish pollinose epistome and silvery white or yellowish clypeus. One strong vertical, one short postvertical, a pair of strong ocellar setae present. Lower postocular setae black; postocular setal row having interruption in lower 1/3 of head; ventral postcranium with 2 black setae and several light cilia. Eyes with short hairs; face glabrous. Face almost parallel-sided, narrowest at upper third, slightly widening at clypeus; ratio of its minimal width to height 30: 73; clypeus not reaching lower margin of eyes, convex downward. Antenna with brown-black scape and pedicel; postpedicel broken. Palpus and proboscis small, brown, with short black hairs; palpus with 1 short seta.

Mesonotum metallic dark-blue-violet, brownish pollinose; pleura greenish-black, whitish pollinose. 5 strong dorsocentral setae (mostly broken) with several microscopic hairs in front of the 1<sup>st</sup> pair, 2 rows of short acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short hairs.

Scutellum with 2 strong setae (broken) and 2 very short lateral hairs.

Legs mostly yellow; fore coxa yellow, mid coxa black, hind coxa brown; fore femur black in basal 1/5; fore tibia brown dorsally in basal half; mid tibia brown-black except for ventral side in distal 1/4; apical segments of fore tarsus brown; mid and hind tarsi black from tip of basitarsus. Femora without long hairs. Fore coxa with black hairs and several long apical setae. Fore tibia with 1 strong and 1 fine anterodorsal, 1 strong and 1 fine posterodorsal, 1 strong posterior, 3 strong apical setae. Fore tarsus simple, fore basitarsus with short basoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 80: 138: 135: 68: 34: 30: 20: 18. Mid femur with 1 subapical anterior seta. Mid tibia with 4 anterodorsal, 2 posterodorsal, 1 ventral and 5 apical setae. 2<sup>nd</sup>-5<sup>th</sup> segments of mid tarsus broken. Length ratio of mid coxa to femur to tibia to basitarsus, 80: 165: 190: 100. Hind femur with one anterodorsal seta at 7/10. Hind tibia with 4 anterodorsal, 1 posterodorsal, 1 ventral, 3 apical setae and elongate narrow areole posterodorsally in basal 1/3 covered with greatly reduced setulae. Hind basitarsus with 1 basoventral, 1 apical short setae, 1 strong dorsal seta at distal 1/3, 1/3 length of basitarsus; 2<sup>nd</sup> segment with elongate apicoventral setula; other segments broken. Length ratio of hind coxa to femur to tibia to tarsus (segments first and second), 37: 162: 201: 68: 85.

Wing evenly greyish. Costa with inconspicuous thickening in middle half of 1<sup>st</sup> radial cell and punctiform thickening at R<sub>1</sub>. R<sub>1</sub> reaching to first third of wing. R<sub>2+3</sub> and R<sub>4+5</sub> straight, slightly divergent at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 41: 27. M<sub>1+2</sub> broken in middle of distal part, joining costal vein just before wing tip, with anteroproximal (basal part of M<sub>1</sub>) and posterodistal (M<sub>2</sub>) stublike veins 5/12-2/3 as long as *m-m*. R<sub>4+5</sub> and distal part of M<sub>1</sub> parallel. Crossveins *m-m* and *m-cu* straight, almost perpendicular to corresponding longitudinal veins. Ratio of distal part of M<sub>1</sub> to *m-m* to distal part of M<sub>1+2</sub> to *m-cu* to distal part of CuA<sub>1</sub>, 106: 12: 49: 40: 42. Anal vein distinct, almost reaching to wing margin; anal lobe well developed; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen metallic bronze-black, grey pollinose, with black hairs and marginal setae. 8<sup>th</sup> segment black, with sparse black hairs. Epandrium black, elongate, slightly longer than 3<sup>rd</sup>-5<sup>th</sup> tergites combined, 1.5 times longer than high, swollen basally, narrowed distad, concave ventrally, rounded distally. Hypandrium basoventral, half as long as epandrium, with subapical dorsal tooth and 2 dorsal teeth in middle. Aedeagus thin and long, bifurcated at apex. One small epandrial seta and short epandrial process at base of hypandrium; 4 strong setae positioned just before apicoventral angle. Epandrial lobe undeveloped. Surstylus yellow, bilobate; ventral lobe broad, wider than long, with 3 thick spines and 2 simple setae; dorsal lobe of surstylus broad, longer than ventral, 2/3 as long as cercus, with apicoventral and apicodorsal projections and shallow distal emargination as figured, 2 strong dorsal setae and several short subapical setulae. Postgonite short, narrow, shorter than surstylus. Cercus yellow, nar-

rowly black along margin, small, rounded-oval, wider than long, with straight cilia not longer than diameter of cercus.

Female unknown.

Length (mm): body 4.8, wing 4.9/1.6, hypopygium 1.7.

*Distribution.* Congo (Kinshasa).

*Etymology.* The Latin name of the species belongs to black colour of face [(Lat. *niger*, *facies*) 'with black face'].

*Diagnosis.* The new species is close to *L. angulicornis*, differing in epistome being mat-black, but clypeus silvery-white pollinose, and ornamented hypandrium and aedeagus; femora yellow; all tibiae partly blackish on dorsal side; lower postocular setae entirely black; 1 strong dorsal seta on hind basitarsus; wing costa simple.

#### 49. *Lichtwardtia nigrotorquata* (PARENT).

*Type material examined.* Holotype [here designated] ♂ [without abdomen], Congo-belge: Eala, VIII-1936, J. GHESQUIERE / R. Mus. Hist. Nat. Belg. 10482 / *Vaalimyia nigrotorquata*, Type, n.sp., O. PARENT [hand-written label] / O. PARENT det. 1936: *Vaalimyia nigrotorquata*, n.sp., O. PARENT [ISNB]; paratype ♀ [red label] / Congo Belge: Eala, 19-XI-1936, J. GHESQUIERE / R. Mus. Hist. Nat. Belg. 10482 / O. PARENT det. 1937: *Vaalimyia nigrotorquata* PAR. / Type [red printed label] / cf. Bul. Mus. Hist. Nat. Belg., XIII, 18 (1937), p. 6, pl. 2,3, fig. 18,19 [ISNB].

*Material examined.* 44 ♂♂, 7 ♀♀, Congo Belge: P.N.G. Miss H. DE SAEGER, 21.V.1951, 28.V.1951, 9.VI.1951, 25.VI.1951, 29.VI.1951, 31.VIII.1951, 24.IX.1951, 25.IX.1951, 28.IX.1951, 6.X.1951, 12.X.1951, 9.VII.1951, 31.III.1952, 5.V.1952, 6.V.1952, 7.V.1952, 28.VI.1952, 30.VI.1952, 4.VII.1952, 7.VII.1952, 9.VII.1952, 17.VII.1952, 31.VII.1952, 1.VIII.1952, 9.IX.1952, H. DE SAEGER [RMCA].

*Diagnosis.* *L. nigrotorquata* is similar to *L. fractinervis* in almost all respects except as noted. Epistome entirely metallic bluish-green; clypeus weakly pollinose. Epandrium large, elongate, nearly twice longer than high, distinctly narrowed distad, with rounded apicoventral angle. Hypandrium basoventral, more than half as long as epandrium, gradually narrowed distad, with pointed apex, without dorsal tooth. Aedeagus thin and long, with small dorsal subapical tooth. One small epandrial seta at base of hypandrium; another strong pedunculate seta positioned just before epandrial lobe. Epandrial lobe prominent, bifurcated, bearing 2 short apical setae. Surstylus bilobate; ventral lobe broad in middle, narrowed basally and distally, pointed at apex, with 1 short basoventral, 4 very short subapical and 2 short midlateral setae; dorsal lobe of surstylus broad, as long as ventral, 2/3 as long as cercus, with apicoventral and apicodorsal projections bearing very short setae and deep distal emargination. Postgonite long, broad, with rounded apex, nearly as long as surstylus. Cercus suboval,

slightly longer than wide, with short stem and straight and curved black cilia 1/3 as long as width of cercus.

*Remark.* O. PARENT usually labelled his type material as follows. One specimen was designated as "Type" (=holotype) and other material as "Paratypes". Both typical male and female *L. nigrotorquata* has a word "Type" on their labels, although the male identified by PARENT in 1936 has a hand-written label, and the female identified by PARENT in 1937 has printed label. As the species description was published in 1937, I think the female was erroneously labelled as "Type" later than the male by a Museum worker. That is why I have designated the male as holotype for *L. nigrotorquata* (erroneously listed as paratype in my previous paper, GRICHANOV, 1998b).

*Distribution.* Congo (Kinshasa).

#### 50. *Lichtwardtia nikolaevae* GRICHANOV

*Material examined.* 3 ♂♀, Congo Belge: P.N.G. Miss H. DE SAEGER, II/me/10, 12.XI.1951, 2744; I/o/2, 13.IX.1950, 818, H. DE SAEGER [RMCA]; 1♂, Congo Belge: PNA, 7-15.VII.1955, P. VANSCHUYTBROECK, 13274-309 / Mont Hoyo, 1280 m, sur plantes basses [ISNB].

*Diagnosis.* Habitus of *L. nikolaevae* is similar to *L. fractinervis* in almost all respects except morphology of hypopygium. CuA<sub>1</sub> 1.5 times longer than *m-cu*. Epandrium with rounded apicoventral angle. Hypandrium nearly half as long as epandrium, thin, with pointed apex, without dorsal tooth. Aedeagus with small dorsal and 2 ventral teeth positioned far before apex. Epandrial lobe bearing 2 apical setae. Surstylus having ventral lobe narrow, digitiform, rounded at apex, with 2 basolateral and 3 short apical setae; dorsal lobe of surstylus 2/3 as long as cercus, with several very short apicoventral and 2 stronger apicodorsal setae and shallow distal incision. Postgonite long, broad, with rounded apex, nearly as long as surstylus. Cercus rounded ventrally, longer than wide, with distinct distodorsal apex.

*Distribution.* Namibia, Congo (Kinshasa) (!).

#### 51. *Lichtwardtia sukharevae* GRICHANOV

*Material examined.* 1♂, South Africa, Natal, Zululand, Ndumu-Game Reserve, 26.X.1972, ME IRWIN, 2632Cc; SO. Africa, Univ. Natal, Ukulinga Res., Frm., 10 km SE Pietermaritzburg, 23-30.10.1985, grassland, RM MILLER, dam margin, malaise trap [NMP]; 2♂♂, Senegal, M'Bour, St. ORSTOM, 2-18.XII.1980, B. SIGWALT leg. / Piège de Malaise [MNHP].

*Diagnosis.* The species is easily distinguished by last two segments of hind tarsus dilated; cercus subtriangular, longer than epandrium, with long pointed apex; short hypandrium and long surstylus.

*Distribution.* Botswana, Madagascar, Namibia, South Africa (!), Senegal (!).

## Genus *Ludovicus* RONDANI

The old genus *Ludovicus* numbers 8 Mediterranean and 21 Chinese species (GRICHANOV, 2000; YANG & SAIGUSA, 2001). PARENT (1938) has given a detailed description of the genus, but most part of generic diagnostic attributes that he used is characteristic of the whole subfamily Dolichopodinae. The author distinguished *Ludovicus*, *Sybistroma* MEIGEN, 1824 (now *Nodicornis* RONDANI, 1843) and some species of *Hercostomus* from other genera of the subfamily by antennal stylus having apical flattening (male secondary sexual character, MSSC). *Ludovicus* was diagnosed by a scape remarkably swollen, almost semi-globular, vase-like at apex, embracing pedicel, which is rudimentary, hardly visible in outer view, but well discernible and convex anteriorly in inner view (MSSC). Females of all species have simple scape and stylus, and at least several species of the genus have normally developed pedicel in females. YANG & SAIGUSA (2001) have added such characters to diagnosis of the genus as yellow legs and irregularly branched hypandrium, which do not correspond to habitus of *L. transcaucasicus* STACKELBERG, *L. spectabilis* PARENT, *L. israelensis* GRICHANOV and some other species. None of European and African species has simple, one-segmented or basodorsal stylus. STACKELBERG (1941) has noted close relationship of *Ludovicus* to *Hercostomus*, distinguishing the former from the latter by swollen scape, almost hidden rudimentary pedicel (in lateral view) and apical or subapical stylus (MSSC). See GRICHANOV (2000) for discussion on the taxonomic position of *Ludovicus*. The genus is recorded for Tropical Africa for the first time.

### 52. *Ludovicus bogoria* GRICHANOV, spec. nov.

(Figs. 40-41)

*Holotype*, ♂, Kenya: Baringo #64, Lake Bogoria Nat. Res., 00°11' N, 36°08' E, 1100m, South end, 21.XI.1992, J. LONDT & A. WHITTINGTON, Fig tree camp site [NMP].

*Paratype*, 1♂, same label.

*Description*. Male. Frons greenish-black, grey-whitish pollinose; face densely silvery-white pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae entirely black. Eyes with short hairs, face glabrous. Face under antennae as wide as height of postpedicel, slightly narrowed towards clypeus; ratio of its maximal width to minimal width to height, 23: 11: 50; clypeus not reaching lower margin of eyes. Antenna 2 times as long as height of head; scape, pedicel and postpedicel black; scape as long as high, subtriangular, with short dorsal setulae; pedicel greatly reduced; postpedicel asymmetric, subtriangular, slightly longer than high, glabrous; stylus subapical, positioned just before apex, gla-

brous; 1<sup>st</sup> segment of stylus 1/3 length of 2<sup>nd</sup>, evenly thick, black; 2<sup>nd</sup> segment of stylus with dirty-yellow filiform stem and white suboval apical flattening in its distal 1/10; the latter is 2 times longer than wide. Length ratio of scape to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 13: 21: 38: 100. Palpus and proboscis small, brown, with short hairs; palpus with 1 fine black seta.

Thorax metallic dark-green, grey pollinose. 6 strong dorsocentral setae gradually decreasing in length anteriorly; 2 rows of acrostichals; 2 strong notopleural, 2 fine humeral, 1 strong posthumeral setae present. Proepisternum with 1 strong black seta above fore coxa and several short light and dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow; fore coxa brownish at base, mid and hind coxae black with yellow apex; hind femur with black dorsal spot at apex; 4-5<sup>th</sup> segments of fore tarsus partly brown on dorsal side, 5<sup>th</sup> tarsomere with black spot on ventral side in its basal half; mid tarsus black from tip of basitarsus, hind tarsus black except brownish base. Fore coxa with dark hairs anteriorly and several fine setae at apex; mid coxa with 1 external seta in addition to anterior hairs; hind coxa with 1 fine external seta. Fore femur flattened ventrally in basal 2/3; having posteroventral row of 5 undulate setae in basal 1/3, 2 times longer than diameter of femur; 1 posteroventral cilia at 2/3 and anteroventral row of 11 setae along entire length, 2 times longer than diameter of femur. Fore tibia slightly swollen, with group of posteroventral cilia at middle, approximately as long as diameter of tibia, 1 anterodorsal and 2 posterodorsal very short setae. Fore basitarsus flattened ventrally and widened, 3 times longer than wide at apex; 2<sup>nd</sup>-3<sup>rd</sup> segments flattened ventrally and widened, as long as wide; 4<sup>th</sup>-5<sup>th</sup> segments flattened ventrally and slightly widened, covered with elongate dorsal hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 60: 86: 72: 45: 11: 13: 15: 15. Mid femur with 1 anterior subapical seta and anteroventral group of black hairs in basal 1/3, equal in length to diameter of femur. Mid tibia with 4 anterodorsal, 4 posterodorsal setae, 2-3 very short ventral setae and 4-5 apical setae. Mid tarsus simple. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 40: 115: 123: 71: 55: 40: 24: 14. Hind femur 4.3 times longer than wide, with one subapical anterodorsal seta at 3/4 and several long ventral cilia at base, nearly equal in length to diameter of femur. Hind tibia with 4 anterodorsal, 5 posterodorsal, 4-5 apical setae. Hind tarsus simple. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 32: 120: 150: 52: 70: 45: 25: 13.

Wing hyaline, strongly modified, having fingerlike apical projection; veins brown. Costa simple, going behind apex of M<sub>1+2</sub>. R<sub>1</sub> 2/5 as long as wing length. R<sub>2+3</sub> almost straight, slightly curved posteriad at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 33: 20. R<sub>4+5</sub> almost straight, running parallel to R<sub>2+3</sub>, curved posteriad at apex, being parallel to distal 1/2 of distal part of M<sub>1+2</sub>. Last radial and first posterior cells each having a small group of macrotrichia at end of R<sub>2+3</sub> on lower side of wing membrane.

Distal part of  $M_{1+2}$  joining costa far before wing apex, with strong double curvature having fold-like rudimentary  $M_2$  directed posteriad. Crossvein *m-cu* almost straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 22: 22. Posterior wing margin having deep rounded emargination just before wing apex. Wing margin bearing also elongate hairs at wing apex and at end of  $CuA_1$ . Anal vein distinct; anal lobe broad; anal angle obtuse. Lower calypter yellow, with black setae. Halter yellow.

Abdomen metallic green, whitish pollinose. 7<sup>th</sup> segment green-black, as long as epandrium. 8<sup>th</sup> segment black, with short black cilia. Epandrium black, with brown-black appendages and setae, large, subrectangular, slightly convex ventrally, nearly twice longer than high. Hypandrium bilobate, with long and short lobes. Aedeagus thin, simple. Distoventral epandrial lobe relatively large and broad, with 1 short distoventral seta and short distal process bearing 2 strong setae. Postgonite as long as dorsal lobe of surstylus, trilobate, with thin medial lobe and pair of shorter lateral lobes. Surstylus with ventral lobe very short, glabrous; dorsal lobe of surstylus with 1 middorsal and 1 subapical ventral thin processes covered with short hairs at apex. Cercus with dark simple short cilia, suboval, broad and flat, with short basodorsal inner lobe and short ventral lobe directed basad.

Female unknown.

Length (mm): body 4.0, antenna 2.1, wing 3.7/1.3, hypopygium 1.3.

*Distribution.* Kenya.

*Etymology.* The species is named for the type locality.

*Diagnosis.* *L. bogoria* is remarkable in having strongly modified fore leg and wing. The new species keys out to Palearctic *L. eucerus* (LOEW) (STACKELBERG, 1941), differing in entirely black postocular setae, morphology and coloration of antennal stylus and hypopygium. It is very close to *L. sinaiensis* GRICHANOV, 2000, differing in fine structures of male secondary sexual characters, e.g., presence of fingerlike hairy lobe on apex of wing.

### Genus *Paracleius* BIGOT

The genus was found by BIGOT, 1859 on the base of figure of *Dolichopus heteroneurus* MACQUART, 1850. The only significant character used by BIGOT (1859) to diagnose the new genus was strongly curved  $M_{1+2}$  vein in contrast to *Gymnopternus* LOEW, 1857, having straight  $M_{1+2}$ . LOEW (1861), who apparently did not know anything about *Dolichopus heteroneurus* and *Paracleius* BIGOT, created his *Pelastoneurus*, using the same character. LOEW (1864) emended ambiguously BIGOT's name into *Paraclius*, so as KERTEZS (1909) considered the name "*Paraclius* LOEW" as a separate genus with the name being preoccupied by BIGOT. COQUILLET (1910) designated a new type species for *Paraclius* (*P. arcuatus*), creating actually a new genus. However, BECKER, CURRAN, PARENT and other dipterists did not adopt the new genus, "*Paraclius*

LOEW". Although, they accepted emendation made by LOEW and used the name *Paraclius* BIGOT sensu *Paraclius* LOEW. ROBINSON (1964, 1970) and DYTE & SMITH (1980) considered *Paraclius* LOEW, 1864, to be a separate nominal genus from *Paracleius* BIGOT, 1859, and not merely an emended spelling of *Paracleius*. ROBINSON (1970) synonymized *Paracleius* BIGOT with *Pelastoneurus* LOEW. *P. heteroneurus* was not associated with any American species and was considered as unrecognisable species. DYTE in his catalogs was very gentle, distinguishing 3 genera: *Paracleius* BIGOT, *Paraclius* LOEW and *Pelastoneurus* LOEW.

Such character as curvature of  $M_{1+2}$  vein does not allow to associate *Dolichopus heteroneurus* with *Paraclius* or *Pelastoneurus* or to distinguish these genera. I have found a nice picture of *D. heteroneurus* habitus made by MACQUART (1850). The figure and description does not contain appropriate diagnostic characters. BECKER (1921, 1922) distinguished *Pelastoneurus* from *Paraclius* by plumose rather than short pubescent stylus and bulging rather than flat clypeus, though he noted that many tropical species possess intermediate characters. Now about 300 species of the *Paraclius/Pelastoneurus* complex are known from all zoogeographical regions. I have looked on several North American *Pelastoneurus* (including *P. vagans*) and *Paraclius* species and have studied species descriptions published by many authors. In fact, many Oriental, Neotropical and Afrotropical species could be placed between typical North American *Paraclius* and *Pelastoneurus*.

So, I consider here *Paraclius* COQUILLET (who erroneously designated a new type species for the emended name) and *Pelastoneurus* LOEW as synonyms of *Paracleius* BIGOT (GRICHANOV, 2003). An application to the I.C.Z.N. has been recently made for the suppression of *Paracleius* Bigot in favour of *Pelastoneurus* (Brooks *et al.*, 2002). I strongly disagree with the suppression. It is a premature application to the I.C.Z.N. made without revision of American *Paracleius*, *Paraclius* and *Pelastoneurus*. I believe that the commission will vote against the application. I think that a neotype should be designated for *Paracleius heteroneurus*, selected from one of the American *Pelastoneurus* species. If anybody will erect subgeneric status for above mentioned names, then the following synonymy should be used: *Paracleius* BIGOT (= *Pelastoneurus* LOEW) and *Leptocorypha* ALDRICH (= *Paraclius* COQUILLET). Afrotropical material (including the type species of *Pseudohercostomus*) allows also synonymy of *Pseudohercostomus* and *Paracleius*.

It is worth to note that the genus has poor borders with *Argyrochlamys* and *Hercostomus* s.l., differing from these and other genera of the subfamily by the following complex of characters. Head usually not wider than high; face usually narrow; male face narrower than female face. One long and strong vertical at the top of head, usually arising from a small mound, one shorter postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present; palpus with 1 short, usually black, seldom yellow seta; antenna po-

sitioned at upper third, rarely at middle of head; stylus often pubescent; first flagellomere usually subtriangular, asymmetric; 1 strong and 1-3 hairlike humeral, 1 posthumeral setae present; proepisternum with 1 strong seta above fore coxa and several short hairs; fore coxa with short black hairs anteriorly and black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs; hind coxa with 1 external seta; mid femur with 1, sometimes with 2 or more strong anterior subapical setae; hind femur often flattened laterally, high, with at least 1 anterodorsal and usually 1 anteroventral setae; hind basitarsus with 1 short basoventral seta, without setae above. Vein  $M_{1+2}$  usually distinctly bent in distal part, with more or less strongly convergent  $R_{4+5}$  and  $M_{1+2}$ ; if  $R_{4+5}$  and  $M_{1+2}$  straight and parallel to each other, then subapical seta positioned at distal third or just behind the middle of hind femora; female oviscapit usually hidden, simple.

The following species groups connected closely with each other could be preliminarily delineated in the Afrotropical *Paracleius*.

1. *afer* CURRAN, *atricornis* PARENT, *brincki* (VANSCHUYTBROECK), *caudatus* PARENT, *funditor* CURRAN, *garamba* GRICHANOV, *kabasha* GRICHANOV, *maranguensis* VANSCHUYTBROECK, *miratarsus* GRICHANOV, *ngarukaensis* VANSCHUYTBROECK, *ogogaensis* (VANSCHUYTBROECK), *obscoenus* (WIEDEMANN); *upembaensis* GRICHANOV;

2. *ambiguus* (PARENT), *congoensis* (PARENT), *julius* GRICHANOV, *machakos* GRICHANOV, *microproctus* PARENT, *micrurus* (PARENT), *naglisi* GRICHANOV, *neocongoensis* GRICHANOV, *nigripalpis* GRICHANOV, *pedunculatus* (PARENT), *reavelli* GRICHANOV, *vilkamaai* GRICHANOV, *whittingtoni* GRICHANOV, *zamotailovi* GRICHANOV;

3. *abstrusus* GRICHANOV, *aeptus* GRICHANOV, *altimontanus* GRICHANOV, *basilewskyi* (VANSCHUYTBROECK), *bretoni* GRICHANOV, *bururi* GRICHANOV, *collarti* (CURRAN), *confusibilis* (PARENT), *dedegwa* GRICHANOV, *dobronosovi* GRICHANOV, *donskoffi* GRICHANOV, *emasculatus* (PARENT), *gabonensis* GRICHANOV, *ineditus* (PARENT), *kassebeeri* GRICHANOV, *leidenrothi* GRICHANOV, *lippensi* GRICHANOV, *miripennis* GRICHANOV, *nebulo* PARENT, *nigeriensis* GRICHANOV;

4. *pectinifer* (PARENT), *schoutedeni* (CURRAN);

5. *sanjensis* GRICHANOV, *zogualensis* GRICHANOV;

6. *diversifemur* (PARENT), *diversipes* (PARENT), *echinatus* (STACKELBERG);

7. *fernandopoensis* GRICHANOV, *irinae* GRICHANOV, *martius* GRICHANOV, *mottusi* (GRICHANOV), *pontifex* (PARENT), *umbricola* (PARENT);

8. *barracoughi* GRICHANOV, *jasoni* GRICHANOV, *michaeli* GRICHANOV, *umngazi* GRICHANOV.

Ungrouped species: *afromaculatus* DYTE & SMITH, *bequaerti* CURRAN, *biadimbi* GRICHANOV, *bissindza* GRICHANOV, *capensis* PARENT, *didyensis* GRICHANOV, *gracilis* (CURRAN), *latipennis* PARENT, *solivagus* LAMB, *zonatus*

PARENT.

**53. *Paracleius abstrusus* GRICHANOV, spec. nov.**  
(Figs. 42-43)

*Holotype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/db/8, 6.II.1952, H. DE SAEGER, 3099 [RMCA].

*Paratype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/id/9, 11.VII.1952, H. DE SAEGER, 3773 [RMCA].

*Description*. Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, 2-2.2 times higher than wide under antennae, slightly narrowing towards clypeus; ratio of its maximal width to minimal width to height, 18: 15: 40; face under antennae slightly wider than or as wide as height of postpedicel; clypeus small, slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, with acute apex and short hairs, 1.6-1.8 times as long as high at base; stylus mid-dorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 14: 7: 30: 11: 40 (holotype) or 15: 7: 26: 15: 35 (paratype). Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum violet-black, weakly grey pollinose; pleura black, whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly black or brown; mid and hind tarsi brown from tip of basitarsus. Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3 and 2 apicodorsal setae; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 52: 75: 68: 37: 14: 8: 8: 10. Mid femur with 1 long and 1-2 short anterior and 1 posteroventral subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 52: 97: 102: 49: 30: 26: 15: 11. Hind femur 3.4-3.5 times longer than high; with 1 anterodorsal seta at 5/6; 1 elongate anteroventral subapical cilia; dorsal row of cilia, at most half as long as diameter of femur; and ventral row of hairs, 1/3 as long as diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, 2-3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio

of hind coxa to femur to tibia to tarsus (segments from first to fifth), 47: 102: 125: 35: 50: 37: 25: 11 (holotype) or 30: 105: 125: 37: 46: 32: 23: 10 (paratype).

Wing greyish; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  inconspicuously convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 28: 3.  $M_{1+2}$  having gentle but distinct curvation towards  $R_{4+5}$  just behind middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 25: 29. Posterior wing margin almost evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black, whitish pollinose laterally. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium black-brown, large, asymmetric, swollen basally, narrowing distad. Hypandrium nearly as long as epandrium, with basodorsal tooth and apical hook. Aedeagus thin, concealed, with subapical swelling covered with small denticles. Distoventral epandrial lobe large, narrow at base, expanded distally, with 3 strong setae at rounded apex; left ventral side of epandrium with single epandrial seta at base of hypandrium; right ventral side at middle with large fingerlike projected lobe bearing short subapical seta. Postgonite shorter than surstyli, very narrow, slightly curved ventrad. Surstylus light-brown, curved, with 2 narrow lobes; ventral lobe with 2 long basoventral setae. Cercus mostly orange, black in distal 1/3 to 1/2, with long simple black marginal setae distoventrally, large, rounded, with inner basodorsal process having two long lobes directed distad and covered with long cilia along ventral sides.

Female unknown.

Length (mm): body 3.0-3.1, antenna 0.8-1.0, wing 3.3/1.0, hypopygium 1.0.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species name means “hidden”, belonging to inner process on cercus.

*Diagnosis.* The new species is close to *P. altimontanus*, differing mainly in fine structures of cercus (see key).

#### 54. *Paracleius aeptus* GRICHANOV, spec. nov.

(Figs. 44-45)

*Holotype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/ke/8, 12.II.1952, H. DE SAEGER, 3105 [RMCA].

*Paratypes*, 2♂♂, same label; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Makpe/8, 5.XI.1951, H. DE SAEGER, 2718; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, PFNK.7/9, 28.VII.1952, H. DE SAEGER, 3842 [RMCA].

*Description.* Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of

strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, nearly 2 times higher than wide under antennae, slightly narrowing towards clypeus; ratio of its maximal width to minimal width to height, 20: 15: 38; face under antennae 1.4 times wider than height of postpedicel; clypeus small, slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, with acute apex and short hairs, 1.4 times as long as high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 15: 5: 19: 14: 32. Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum violet-black, weakly grey pollinose; pleura black, whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly black; mid and hind tarsi brown from tip of basitarsus. (Fore legs broken in holotype). Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3, 2 apicodorsal setae and long apicoventral cilia, half as long as basitarsus; 2<sup>nd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 47: 73: 71: 33: 15: 10: 7: 8. Mid femur with 1 long and 1-2 short anterior and 1 posteroventral subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 46: 100: 107: 50: 34: 24: 20: 11. Hind femur 3.5 times longer than high; with 1 anterodorsal seta at 5/6; 1 elongate anteroventral subapical cilia; dorsal row of cilia, at most half as long as diameter of femur; and ventral row of hairs, 1/3 as long as diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, 2-3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 105: 125: 35: 53: 38: 23: 11.

Wing greyish; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  inconspicuously convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 33: 3.  $M_{1+2}$  having gentle but distinct curvation towards  $R_{4+5}$  just behind middle of its distal part, joining costa before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 27: 19. Posterior wing margin almost evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black, whitish pollinose laterally. 7<sup>th</sup> segment half as long as

epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium black-brown, large, elongate-oval, nearly 2 times longer than high. Hypandrium narrow, simple, half as long as epandrium. Aedeagus thin, simple, concealed. Distoventral epandrial lobe narrow, digitiform, with 3 apical setae; 1 short epandrial seta at base of hypandrium. Postgonite shorter than surstyli, narrow, curved ventrad. Surstylus light-brown, with 2 lobes; ventral lobe digitiform, with 1 long basoventral and 1 short apical setae; dorsal lobe of surstylus rounded, with single middorsal setula. Cercus mostly black, orange at base, 1.5 times longer than wide, with acute distal apex, with long simple black marginal setae distally and ventrally.

Female unknown.

Length (mm): body 3.4, antenna 0.9, wing 3.4/1.2, hypopygium 1.2.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species name originates from Greek word “aeptos” (unexpected).

*Diagnosis.* The new species is close to *P. dobronosovi*, differing in longer postpedicel, 1.4 times longer than high; and cercus being 1.5 times longer than wide, having acute apex and almost even margins.

### 55. *Paracleius afer* CURRAN

*Type material examined.* ♀, Paratypus [red label] / Musee du Congo, S. Afr.: East London, 28/2/25 (MUNRO), Ex coll. CURRAN / R. Det. E 1284 / Paratype *Paraclius afra* CURRAN

*Material examined.* ♂, Musee du Congo, S. Afr.: East London, 16/5/25 (MUNRO), Ex coll. CURRAN / R. Det. F 1284 / *Paraclius afra* CURRAN, det C.H. CURRAN [RMCA].

*Diagnosis.* Postocular setae black. All femora mostly black; tibiae mostly yellow; hind tibia blackish at apex; hind basitarsus black; fore and mid tibiae with ordinary setae; mid femur with 1 anterior seta; mid femur with anteroventral pile of setulae along basal 1/2 or 2/3, at most half as long as diameter of femur; hind femur with several subapical anteroventral cilia in addition to anterior seta. Cercus black, bisegmented, fabiform, rounded ventrally.  $M_{1+2}$  gently curved to  $R_{4+5}$  in middle. Length 4.0–4.5 mm.

*Distribution.* South Africa; ?Kenya.

### 56. *Paracleius altimontanus* GRICHANOV, spec. nov.

(Figs. 46–47)

*Holotype*, ♂, Congo Belge: P.N.U., Lusinga (1760 m), 1–8.XII.1947, Miss. G.F. DE WITTE, 1123a / P. VANSCHUYTBROECK det. 19??, *Pelastoneurus pectinifer* PARENT [ISNB].

*Description.* Male. Frons bluish-black, whitish pollinose; face black,

densely silvery-white pollinose. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, 1.8 times higher than wide under antennae, slightly narrowing towards clypeus; ratio of its maximal width to minimal width to height, 17: 10: 30; face under antennae slightly wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, elongate-triangular, with acute apex and short hairs, 1.8 times as long as high at base; stylus positioned just before middle of dorsal side, black, with hairs as long as basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 12: 6: 25: 14: 32. Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum bluish-black, weakly grey pollinose; pleura black, whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 microscopic lateral hairs (all broken).

Legs including coxae mostly yellow; mid coxa mostly brown; mid and hind tarsi brown from 2<sup>nd</sup> segment. Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3, and 2 apicodorsal setae; 3<sup>rd</sup>–5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 44: 66: 60: 35: 10: 7: 6: 10. Mid femur with 1 strong and 1 weak anterior (both broken) and 1 posteroventral subapical setae. Mid tibia with 4 anterodorsal, 4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>–4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 40: 92: 103: 47: 30: 24: 13: 11. Hind femur 3.6 times longer than high; with 1 anterodorsal seta at 5/6; 1 elongate anteroventral subapical cilia; dorsal row of cilia, at most half as long as diameter of femur; and ventral row of hairs, 1/3 as long as diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, 2 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>–2<sup>nd</sup> tarsomeres each with apicoventral setulae (other segments broken). Length ratio of hind coxa to femur to tibia to tarsus (segments first and second), 25: 95: 115: 35: 48.

Wing greyish; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  inconspicuously convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 25: 2.  $M_{1+2}$  having strong but gentle curvature towards  $R_{4+5}$  just behind middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 24: 33. Posterior wing margin almost evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black, whitish pollinose laterally. 7<sup>th</sup> segment 3/5 length of



epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium black-brown, large, egg-like, narrowing distad. Hypandrium 2/3 as long as epandrium, simple. Aedeagus thin, concealed, with apical hook. Distoventral epandrial lobe large, fingerlike, with 3 strong setae at rounded apex; left ventral side of epandrium with single epandrial seta at base of hypandrium; right ventral side at middle with large fingerlike projected lobe bearing subapical seta. Postgonite shorter than surstyli, very narrow, slightly curved ventrad. Surstylus light-brown, curved, with 2 narrow lobes; ventral lobe thin, with 1 thick short apical and 1 strong basoventral setae; dorsal lobe wider, with 2 apical setulae. Cercus mostly yellow-orange, narrowly blackish along ventral margin, with long simple black marginal setae distoventrally, large, slightly longer than high, with acute apex and inner dorsal process having two long lobes; dorsal lobe of the process long, thin, whitish, sparsely haired, directed distad; dorsal lobe long, broad, densely covered with hairs and short setae at apex as figured.

Female unknown.

Length (mm): body 2.8, antenna 0.8, wing 3.2/1.1, hypopygium 1.2.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species is close to *P. abstrusus*, differing mainly in fine structures of cercus (see key).

#### 57. *Paracleius ambiguus* (PARENT)

(Fig. 48)

*Type material examined.* ♂, Holotypus [red label] / Musee du Congo, Stanleville, 12.II.1928, A. COLLART / R. Det. 2414 / *Pelastoneurus ambiguus* n.sp. Type. O. PARENT [RMCA].

*Material examined.* 2♂♂, Ethiopia, Bahor Dar, I.1969, Juni/Juli 1969, SCHÄUFFELE leg. [SMNS]; 1♂, 1♀, Ethiopia, Awash Nat. Res., 30.XII.71, A. FREIDBERG [TAU]; ♂, Lac Eduard: Ishango (Semliki), 14.XII.35, Dr. H. DAMAS, Parc Nat. Albert-93 / P. VANSCHUYTBROECK. Det. 1950, *Tachytrechus alternatus* CURRAN [RMCA]; 2♂♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/fd/17 & II/jd/11, 28.V.1951 & 1.IX.1952 H. DE SAEGER, 1824 & 4008 [RMCA].

*Diagnosis.* Lateral postocular setae white; face slightly narrowing downward; face in middle slightly wider than postpedicel; femora yellow, mid and hind coxae mostly brown or black; tibiae entirely yellow; mid tibia with 3 ventral setae;  $M_{1+2}$  gradually approaching to  $R_{4+5}$ ; the two veins convergent to wing apex; abdomen entirely dark; cercus simple, elongate-oval, much smaller than epandrium; 1.5 times longer than wide, with yellow cilia, not longer than width of cercus; body length, 4 mm.

*Distribution.* Congo (Kinshasa); Ghana, Ethiopia (!).

#### 58. *Paracleius barracloughi* GRICHANOV, spec. nov.

(Figs. 49-50)

*Holotype*, ♂, South Africa: Natal, Kosi Bay Nat. Reserve, 2632DD, 30.XI-2.XII.1982, LONDT, BARRACLOUGH & STUCKENBERG, Forest & open woodland areas [NMP].

*Paratype*, ♂, same label.

*Description.* Male. Frons as high as face, black, grey pollinose; face densely white pollinose. One long and strong vertical at the top of head, one shorter black postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Postocular setae white, 1-2 upper postoculars black. Eyes with short hairs; face glabrous, very narrow, almost parallel-sided, 10 times higher than wide in middle; clypeus not reaching lower margin of eyes. Antenna positioned at middle of head, 1.5 times as long as height of head; mostly orange-yellow; scape simple, with several black dorsal hairs; pedicel short, internally convex anteriad, with short distal setulae; postpedicel brown-black in distal half, suboval, with rounded apex and short hairs, 1.3 times as long as high at base; stylus positioned just before middle of dorsal side of postpedicel, black; 1<sup>st</sup> segment of stylus short and thick; 2<sup>nd</sup> segment filiform, glabrous, with oval flat widening in apical 1/6 of stylus; the widening 2 times longer than wide, with rounded apex. Length ratio of scape to pedicel to postpedicel to stylus, 7: 2: 12: 40. Palpus and proboscis small, yellow, with short hairs; palpus with 1 short yellow seta.

Thorax mostly yellow, weakly pollinose. Mesonotum mostly orange, having black longitudinal stripe, broad posteriorly and very narrow in anterior half of mesonotum; scutellum black dorsally. 6 dorsocentral setae with 5<sup>th</sup> seta weak and short, weaker in holotype than that in paratype, shifted towards acrostichal row; acrostichals biseriate. Proepisternum with 1 strong white seta above fore coxa and several short white hairs. Scutellum with 2 strong setae, and 2 short lateral hairs.

Legs including coxae yellow; 5<sup>th</sup> segment of tarsi brownish. Femora without long hairs. Fore tibia with 2 anterodorsal, 2 posterodorsal, 2-3 short apical setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 34: 55: 55: 25: 14: 8: 6: 7. Mid femur with 1 anterior subapical setae. Mid tibia with 2 anterodorsal, 2 posterodorsal, 2 short posteroventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 30: 62: 78: 43: 26: 15: 10: 9. Hind femur 6 times longer than high, with 1 anterodorsal seta at 5/6. Hind tibia with 2 pairs of strong anterodorsal and posterodorsal setae at 1/5 and 3/5, 1 short posterodorsal at 1/3, 3 apical setae, without strong ventral setae. Hind basitarsus with 2 ventral setulae; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 20: 85: 95: 23: 37: 19: 11: 9.

Wing hyaline, veins yellow-brown. Costa simple.  $R_{2+3}$  almost straight.

Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 20:5.  $R_{4+5}$  slightly curved posteriad at apex.  $M_{1+2}$  having weak but distinct curvature at middle of distal part, then forming gentle arc, gradually converging to  $R_{4+5}$ , joining costa just before wing apex. Crossvein *m-cu* positioned just before middle of wing, straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 9: 49. Posterior wing margin evenly convex. Anal vein weak; anal lobe narrow; anal angle absent. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen mostly orange-yellow, weakly pollinose; 2<sup>nd</sup>-5<sup>th</sup> tergites with small black lateral spots at base. 7<sup>th</sup> segment very short, yellow. 8<sup>th</sup> segment yellow, with sparse fine dark cilia. Epandrium mostly yellow, black basally, suboval, large, 1.5 times as long as high, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined. Hypandrium brown, simple, with small ventral apical tooth. Aedeagus thin, simple, concealed. Distoventral epandrial lobe long and narrow, with 3 strong setae. Postgonite as long as ventral surstylus, narrow, curved ventrad. Surstylus yellow, with 2 narrow lobes; ventral lobe with 5 simple setae at apex; dorsal lobe of surstylus with 4 short subapical setae. Cercus yellow, long and narrow, 4 times longer than wide at base, a little more than half as long as epandrium, with short simple light hairs along entire length.

Female unknown.

Length (mm): body 2.3-2.5, antenna 0.8, wing 2.1/0.7, hypopygium 0.55.

*Distribution.* South Africa.

*Etymology.* The species is named for one of the collectors, Dr. David BARRACLOUGH.

*Diagnosis.* The new species is close to *P. michaeli* and *P. jasoni*, differing in flagellate stylus being 2 times longer than antennomeres combined, and in morphology of hypopygium.

#### 59. *Paracleius basilewskyi* (VANSCHUYTBROECK)

(Fig. 51)

*Type material examined.* ♂, Holotypus [red label] / Coll. Mus. Congo, Tshuapa, Eala, 8.XII.1952, P. BASILEWSKY / P. VANSCHUYTBROECK det. 195? *Pelastoneurus basilewskyi* n.sp.

*Material examined.* 1♂, Coll. Mus. Congo, Tshuapa: Eala, 8.XII.1952, B. BASILEWSKY / R. Det. 7631c / P. VANSCHUYTBROECK det. 195?, *Pelastoneurus ambiguus* PARENT [RMCA].

*Diagnosis.* Antenna mostly yellow-brownish; postocular setae entirely black; all femora yellow; hind coxa yellow; mid femur with 1-2 anterior subapical setae; hind femur with row of anterodorsal setae ¼ length of femur diameter; fore tibia with very short apicoventral seta; mid tibia with 2 ventral setae; lower calypter with black cilia; posterior wing margin almost evenly convex; apical curved part of  $M_{1+2}$  approximately half as long as middle part; cercus with sim-

ple setae and short simple inner middorsal process.

*Distribution.* Congo (Kinshasa).

#### 60. *Paracleius bequaerti* CURRAN

*Type material examined.* 4♀♀, Paratypus [red label] / Musee du Congo, Liberia, Bakratown, X.1926, Dr. J. BEQUAERT / R. Det. V 1954 / Paratype *Paraclius* ♀ *bequaerti* CURRAN [RMCA].

*Diagnosis.* Antenna with scape and pedicel orange; postpedicel mostly black, as long as high; face in middle narrower than height of postpedicel; lower postoculars white, partly black; femora yellow; mid and hind coxae mostly brown or black; hind femur with very small black spot at extreme apex; hind basitarsus entirely blackish; mid and hind femora with 1 anterior seta in addition to several anteroventral cilia; mid tibia with 1-2 ventral seta;  $M_{1+2}$  with angular flexion at 2/3 of distal part;  $M_{1+2}$  and  $R_{4+5}$  practically contiguous at apex; abdomen entirely dark; body length, 6 mm.

*Distribution.* Liberia; Congo (Kinshasa).

#### 61. *Paracleius biadimbi* GRICHANOV, spec. nov.

(Fig. 52)

*Holotype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Biadimbi, 22.II.1951, Réc. H. DE SAEGER, 1309 [RMCA].

*Paratypes* [in alcohol], 1♂ [Ivory Coast:] C.I., N' Man, Zogualé, Cascade Mont la Den, 7°25' N, 7°34' W, 16.II.1998, leg. KASSEBEER & HILGER [ZIUK]; 2♂♂, C.I., SW' Komandimi, NP Comoe, Camp Univ. Würzb., 8°45' N, 3°49' W, G-Schale 13., 31.I.1998, leg. S. HILGER [ZIUK].

*Description.* Male. Frons bluish-green, grey pollinose; face densely white pollinose. One strong vertical seta arising from small mound at the top of head, one postvertical, a pair of ocellar setae present (all setae broken). Lower postocular setae white. Eyes with short hairs; face glabrous, with small clypeus, narrowest at suture; face under antennae as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 15: 8: 44; clypeus not reaching lower margin of eyes. Antenna mostly black, scape and pedicel orange ventrally; scape with short inner acute projection; pedicel very short and high, with short distal setulae; postpedicel blade-like, asymmetric, with rounded apex, 2 times longer than high, with microscopic hairs; stylus subapical (2<sup>nd</sup> segment broken in holotype). Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> segment of stylus, 10: 4: 30: 10. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Mesonotum dark-green, weakly pollinose, pleura greenish-black, white pollinose. 6 strong dorsocentral setae, 2 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong

black seta above fore coxa and several light hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs bicolorate, with coxae and femora black; trochanters, knees and anterior four tibiae yellow; hind tibia and anterior four basitarsi mostly yellow; fore and mid tarsi black from tip of basitarsus; hind tibia black at apex. Fore coxa with numerous black hairs anteriorly and several black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs and 2 apical setae. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 3 posterodorsal and 1 very short apicoventral setae; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 40: 65: 62: 30: 10: 8: 8: 7. Mid femur with 1 anterior subapical seta and elongate ventral cilia, not longer than height of femur. Mid tibia with 3 anterodorsal, 3 posterodorsal, 1 anteroventral at middle and 4-5 apical setae. Mid tarsus simple. Length ratio of mid coxa to femur to tibia to tarsus (first and second segments), 40: 85: 101: 40: 23. Hind femur flattened laterally, 4 times longer than high; with 2-3 anterodorsal setae, anterodorsal and anteroventral rows of elongate setulae, at most half as long as height of femur. Hind tibia with 4 anterodorsal, 4 posterodorsal, 3 apical setae, without strong ventral setae. Hind tarsi broken in holotype. Length ratio of hind coxa to femur to tibia, 25: 90: 110. Hind basitarsus 2/3 length of next segment, having several ventral and apical setulae.

Wing almost hyaline, veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 35: 1.  $M_{1+2}$  strongly curved towards  $R_{4+5}$ , forming wide arc in distal 2/5 of distal part of vein, joining costa far before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins; *m-cu* approximately 2/3 the length of distal part of  $CuA_1$ ;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen dark-green, black along sutures, densely white pollinose laterally. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, small, nearly as long as 4-5<sup>th</sup> tergites combined, subquadrate, slightly longer than high. Hypandrium thin, as long as epandrium. Aedeagus thin, with dorsal lobe far before apex, crenulate dorsally in distal part. Distoventral epandrial lobe long, with 3 apical setae. Postgonite greatly reduced. Surstylus brown, with 2 lobes of approximately equal length and width, which swollen at base, pointed apically, with short apical setulae. Cercus large, nearly as long as epandrium, elongate-oval, nearly twice longer than wide, with short simple marginal setae along entire length.

Female unknown.

Length (mm): body 3.3, wing 2.8, hypopygium 1.0.

*Distribution.* Congo (Kinshasa), Ivory Coast.

*Etymology.* The species is named after the type locality of the holotype.

*Diagnosis.* The new species keys out to *P. latipennis*, differing in body

size and antenna being mostly black, with scape and pedicel orange ventrally. Lower postocular setae white; wing almost hyaline;  $M_{1+2}$  with angular curvation in distal part; all femora black.

## 62. *Paracleius bissindza* GRICHANOV, spec. nov.

(Fig. 53)

*Holotype*, ♂, Museum Paris, Rep. Pop. Congo, L. MATILE / Riv. Du Congo, vers Bissindza, 16.X.1975 [MNHP].

*Description.* Male. Frons greenish-black, grey pollinose; face black, white pollinose. One long and strong vertical at the top of head, one short postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Postocular setae black. Eyes with short hairs; face glabrous, with slightly bulging clypeus, narrowest in middle; face under antennae as wide as height of postpedicel, ratio of its maximal width to minimal width to height, 11: 2: 34; clypeus not reaching lower margin of eyes. Antenna slightly shorter than height of head; mostly black; scape light-brown ventrally, with short pointed inner apical process; pedicel internally convex anteriorly, with short distal setulae; postpedicel suboval, with rounded apex and short hairs, as long as high at base; stylus middorsal, black, filiform, with hairs as long as basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 7: 5: 8: 45. Palpus and proboscis small, black, with short black hairs; palpus with 1 short black seta.

Thorax bluish-black, grey pollinose. 6 strong dorsocentral setae decreasing in length anteriorly; acrostichals biseriate. Proepisternum with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow; fore coxa yellow; mid and hind coxae mostly brown-black, having yellow apex; hind femur and tibia brownish dorsally at distal apex; last 2-3 segments of fore tarsus brownish; mid and hind tarsi brown-black from tip of basitarsus. Fore coxa with black hairs anteriorly and several black setae at apex; mid coxa with 1-2 strong external setae in addition to anterior hairs. Fore femur with several elongate posteroventral hairs at apex. Fore tibia with 2 anterodorsal, 2 posterodorsal, 1 subapical dorsal, 1 strong but short apicoventral setae; 5<sup>th</sup> segment of fore tarsus having setiform claws and slightly enlarged pulvilli. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 60: 56: 32: 8: 7: 6: 8. Mid femur with 1 anterior subapical seta and posteroventral row of hairs, at most as long as diameter of femur. Mid tibia with 2 anterodorsal, 2 posterodorsal, 2 dorsal, 1 ventral and 5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 40: 73: 75: 36: 21: 18: 13: 8. Hind femur flattened, nearly 4 times as long as high, with 1 anterodorsal seta at 3/4 and irregular anteroventral row of cilia of different length, with some cilia longer than diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 4 weak ventral and 2 apical setae. Hind

basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 21: 75: 92: 26: 35: 25: 15: 10.

Wing greyish, veins brown. Costa simple.  $R_{2+3}$  almost straight.  $R_{4+5}$  slightly curved posteriad at apex. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 22: 10.  $M_{1+2}$  inconspicuously curved anteriorly, joining costa just before wing apex.  $R_{4+5}$  and  $M_{1+2}$  distinctly convergent at apex. Crossvein *m-cu* straight, forming nearly right angles with longitudinal veins, slightly shorter or equal to distal part of  $CuA_1$ , 24: 17. Posterior wing margin evenly convex. Anal lobe weakly developed; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen greenish-black, whitish pollinose laterally. 8<sup>th</sup> segment black, with sparse fine dark cilia. Epandrium black, suboval, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined. Hypandrium 2/3 length of epandrium, thin, pointed apically. Aedeagus thin, concealed. Distoventral epandrial lobe light-brown, large and broad, with 2 short setae ventrally and 1 very strong and long subapical seta. Postgonite short, narrow, slightly curved ventrad. Surstylus dirty-yellow, with 2 lobes; ventral lobe very small, concealed, with 1 ventral seta; dorsal lobe of surstylus very large and broad, 1 short ventral, 2 short apical and 1 strong hooked dorsal seta. Cercus black, very narrow, with long simple black setae apically and ventrally in distal half.

Female unknown.

Length (mm): body 2.2, antenna 0.7, wing 2.4, hypopygium 0.8.

*Distribution*. Congo (Brazzaville).

*Etymology*. The species is named for the type locality.

*Diagnosis*. The new species is close to *P. microproctus* and *P. sanjensis*, differing in hind femur being brownish dorsally at distal apex; mid femur having 1 anterior subapical seta and posteroventral row of hairs, at most as long as diameter of femur; cercus narrow, band-like;  $M_{1+2}$  with inconspicuous flexion, reaching costa at wing apex.

### 63. *Paracleius bretoni* GRICHANOV, spec. nov.

(Fig. 54)

*Holotype*, ♂, [Gabon:] Ipassa Piste Panthère (Malaise), 11-16.V.1974 / Museum Paris, Gabon, Mission M. DONSKOFF et J. LE BRETON [NHMP].

*Description*. Male. *P. bretoni* is similar to *P. donskoffi* (see description of the latter species below) in almost all respects except as noted. Ratio of maximal width to minimal width to height of face, 17: 10: 42; postpedicel 1.5 times as long as high at base; length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 8: 6: 20: 10: 39.

Legs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 74: 58: 35: 10: 7: 6: 6. Same ratio for mid leg, 36: 95: 102: 43: 30: 20: 17: 10. Same ratio for hind leg, 37: 92: 122: 30: 47: 31: 16: 10.

Wing. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 25: 2. Ratio of *m-cu* to distal part of  $CuA_1$ , 22: 22.

Hypopygial cercus suboval, nearly 2 times longer than wide, deeply incised along ventral margin to apex, having 2 rows of marginal setae and large and thick trilobate inner middorsal process bearing 2-3 flattened setae on apex of each lobe; 6 distalmost setae in inner cercal row distinctly flattened, thicker than outer setae.

Female unknown.

Length (mm): body 3.2, antenna 0.8, wing 3.2, hypopygium 1.1.

*Distribution*. Gabon.

*Etymology*. The species is named for one of the collectors.

*Diagnosis*. The new species is almost identical to *P. donskoffi*, differing in morphology of male cercus.

### 64. *Paracleius brincki* (VANSCHUYTBROECK)

(Fig. 55)

*Type material examined*. *Holotype*, ♂, S. Afr., Cape Prov., Cape Town, Table Mnt, Blinkwater, 4.XI.1950, No. 23 / Swedish South Africa Expedition 1950-1951, BRINCK-RUDEBECK / Type [red label] / P. VANSCHUYTBROECK det. 1958 *Pelastoneurus brincki* ♂ n.sp. / Zool. Mus. Lund, Sweden, Dolichopodidae, Type No. 18: 1-5. *Paratypes*: 4♀♀, same first two labels; Type No.: 18:2, 18:3, 18:4, 18:5 [MZLU].

*Material examined*. 11♂♂, 5♀♀, same first two labels [MZLU]; 4♂♂, 3♀♀, S. Africa (S6): C.P., Silvermine, N.R., Cape penin., 2-3.I.1972 / Southern African Exp., B.M. 1072-1 [BMNH]; ♂, South Africa: Natal, Gorge Nat. Res., 10.X.1983, A. FREIDBERG [TAU]; 2♂♂, South Africa: Natal Prov., Richmond Dist., Pateni, 30°09' E, 29°56' S (2930Cc), 18.XI.1971, temp. forest, B.R. STUCKENBERG & M.E. IRWIN [NMP].

*Description*. Male. Frons black, grey-white pollinose; face having black-brown ground colour, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black; the lowest seta very strong. Eyes with short hairs; face glabrous, with slightly convex clypeus, narrowest at suture; clypeus separated from eyes, reaching to or somewhat projected below lower margin of eyes, having semioval apex; face in middle as wide as or slightly wider than height of postpedicel; ratio of its maximal width to minimal width to height, 25: 20: 78. Antenna slightly shorter than height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae and 1 strong distodorsal seta, as long as pedicel; postpedicel suboval, rounded or right-angular apicodorsally, as long as or slightly longer than high, with microscopic hairs; stylus positioned at distal 3/4 of dorsal side, black, with hairs shorter than basal di-

ameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 10: 5: 19: 15: 42. Palpus and proboscis covered with clypeus, small, black, with short hairs; palpus with 1 short black seta.

Thorax green-black, mesonotum grey pollinose, pleura white pollinose. 6 strong dorsocentral setae decreasing in size anteriorly, with 1<sup>st</sup> seta being very short; 2 rows of acrostichals. Anterior slope of mesonotum covered with numerous short black hairs. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly yellow, with brown or black coxae having yellow apex; sometimes hind knee brownish dorsally; hind tibia blackish dorsally at apex; 1<sup>st</sup>, 2<sup>nd</sup> and sometimes 3<sup>rd</sup> segments of fore tarsus yellow with brown distal apex, 3<sup>rd</sup>-5<sup>th</sup> or 4-5<sup>th</sup> tarsomeres black; mid and hind tarsi brown-black from tip of basitarsus. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 2-3 posterodorsal setae; 1<sup>st</sup>-3<sup>rd</sup> or only 1<sup>st</sup> and 2<sup>nd</sup> segments of fore tarsus inconspicuously thickened at extreme apex, having there brownish ventral pile of microscopic hairs; 3<sup>rd</sup>-5<sup>th</sup> or only 4-5<sup>th</sup> segments of the same tarsus flattened laterally and widened, each approximately 1.7-2.0 times longer than wide. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 70: 105: 98: 56: 25: 17: 15: 13. Mid femur simple, with 2-3 anterior subapical setae. Mid tibia with 4 anterodorsal, 4 posterodorsal, 2-3 ventral and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several short apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 60: 130: 142: 74: 39: 30: 17: 15. Hind femur flattened laterally, 3 times longer than high; with 1 anterodorsal seta at 4/5; bare ventrally. Hind tibia with 5 anterodorsal, 4-5 posterodorsal, 3 apical, several weak ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 40: 125: 162: 52: 68: 44: 27: 16.

Wing greyish, brownish along costa; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 34: 5. M<sub>1+2</sub> having gentle curvation towards R<sub>4+5</sub> at middle of distal part, joining costa far before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 30: 25; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex, with very small excision at apex of CuA<sub>1</sub>. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres orange-yellow.

Abdomen greenish-black, densely white pollinose laterally; 6-7<sup>th</sup> segments brown-black. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, as long as 5<sup>th</sup> tergite. Hypandrium bifurcated, its visible parts half as long as epandrium; both lobes of hypandrium pointed at apex. Aedeagus thin, concealed. Distoventral epandrial lobe broad, having 1 short

basal, 1 long bifurcated middorsal and 1 long apical setae. Postgonite as wide as and as long as ventral lobe of surstylus, slightly curved ventrad, angular at apex. Surstylus brown, slightly curved, with 2 narrow lobes; ventral lobe rounded at apex, with subapical tooth; dorsal lobe of surstylus pointed at apex, with 1 strong middorsal seta and 2 short setulae at apex. Cercus black, with short simple black marginal hairs and several longish setae at apex, trapezoidal, large, 1.5 times longer than wide, with angular distodorsal and basoventral apices.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: clypeus reaching to lower margin of eyes; ratio of maximal width to minimal width to height of face, 30: 25: 60.

Length (mm): body 4.2-4.4, antenna 1.1-1.2, wing 4.2-4.3/1.3-1.4, hypopygium 1.2-1.3.

*Distribution.* South Africa.

*Diagnosis.* *P. brincki* is related to *P. maranguensis* and *P. kabasha*, differing in morphology of hypopygium and fore tarsus. 4-5<sup>th</sup> segments of fore tarsus are slightly widened and flattened; 3<sup>rd</sup> segment is either thickened at apex or slightly widened and flattened.

#### 65. *Paracleius bururi* GRICHANOV, spec. nov.

(Fig. 56)

*Holotype*, ♂, Urundi: Bururi, alt. 1950 m, 8.I.1949, F.FRANÇOIS / R.I.Sc.N.B. I.G. 24.452 [ISNB].

*Description.* Male. *P. bururi* is similar to *P. dedegwa* (see description of the latter species below) in almost all respects except as noted. Face 2.1 times higher than wide under antennae; ratio of its maximal width to minimal width to height, 16: 11: 34. Antennal postpedicel suboval, with rounded apex, 1.3 times as long as high at base; stylus mostly broken.

Legs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 36: 56: 59: 29: 9: 8: 7: 7. Same ratio for mid leg, 30: 81: 90: 42: 25: 20: 14: 8. Same ratio for hind leg, 25: 85: 108: 32: 45: 27: 19: 10. Hind femur 4.5 times longer than high; hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, 5 ventral, 2 apical setae.

Wing. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 25: 4. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 22: 24.

Abdomen. 7<sup>th</sup> segment short. Epandrium suboval, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, narrowing distally. Hypandrium not broad, half as long as epandrium, having sclerotised hook-like lobe at base. Aedeagus thin, simple, concealed. Distoventral epandrial lobe long and narrow, with 3 short setae at apex; 1 epandrial seta at base of hypandrium. Postgonite as long as ventral lobe of surstylus, narrow, curved ventrad. Surstylus short and narrow, with 2 lobes; ventral lobe longer than dorsal, with setulae at apex; dorsal lobe of surstylus with 1 short dorsal and 1 long strong apical setae. Cercus subtriangular, 1.5

times longer than high, with uneven distal margin, having rather long simple marginal cilia and 2 strong hooked inner setae at basoventral margin.

Female unknown.

Length (mm): body 5.3, wing 5.4/1.6, hypopygium 1.7.

*Distribution.* Burundi.

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species is related to *P. dedegwa*, differing in hypopygium morphology mainly. Epandrial lobe stick-shape, with 3 apical cilia. Hypandrium having sclerotised hook-like lobe at base. Cercus subtriangular, 1.5 times longer than high, with 2 strong hooked inner setae at basoventral margin.

#### 66. *Paracleius collarti* (CURRAN)

(Fig. 57)

*Type material examined.* ♂, Holotypus [red label; head broken] / Musée du Congo, Ganda Buku, 4.VIII.1926, A. COLLART / R. Det. B 1285 / Type. *Pelastoneurus collarti* CURRAN [red] / *Pelastoneurus collarti* CURRAN, det. C.H. CURRAN; ♀, allotypus, same labels [head broken].

*Diagnosis.* Postocular setae entirely black; antenna mostly yellow-brownish; apical curved part of  $M_{1+2}$  approximately half as long as middle part; Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 30: 3. Ratio of *m-cu* to distal part of  $CuA_1$ , 23: 20; posterior wing margin almost evenly convex; lower calypter with black cilia; all femora yellow; mid femur with 3-4 subapicals; fore tibia with very short apicoventral seta; mid tibia with 2 ventrals; epandrial lobe broad, bearing a fan of about 6 long apical cilia; cercus dark yellow, triangular, without process, with simple setae and very fine light hooked hairs.

*Distribution.* Congo (Kinshasa); Ghana, Nigeria.

#### 67. *Paracleius confusibilis* (PARENT)

(Fig. 58)

*Type material examined.* Holotype, ♂, Eala, 1.VI.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 / *Pelastoneurus confusibilis* n.sp. Type. O. PARENT / Type [red label] / cf. Bul. Mus. Hist. Nat. Belg. XIII-18 (1937) p.3, pl. 2, fig. 10 [ISNB]; ♂, Holotypus [red label] / Coll. Mus. Congo, Basoko, Yaebero, IV.1949, P.L.G. BENOIT-234 / P. VANSCHUYTBROECK det. *Pelastoneurus benoitii* n.sp. [RMCA].

*Material examined.* ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/eb/9, 13.III.1952, Réc. H. DE SAEGER, 3234 [RMCA]; 1♂, C.I., W' Man, Zadéplen Cascades, Pont Liane, 7°25' N, 7°35' W, Bachbett, 19.II.1998, leg. KASSEBEER & HILGER [ZIUK]

*Diagnosis.* Postocular setae entirely black; antenna mostly yellow-

brownish; postpedicel slightly longer than high; length ratio of scape to pedicel to postpedicel to stylus, 30: 20: 35: 130. Apical curved part of  $M_{1+2}$  nearly half as long as middle part; Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 75: 8. Ratio of *m-cu* to distal part of  $CuA_1$ , 50: 70; posterior wing margin almost evenly convex; lower calypter with black cilia. All femora yellow; mid femur with 2 subapical setae; hind femur with 1 anterior and about 6 anterodorsal setae in apical half (except apex); fore tibia with very short apicoventral seta; mid tibia with 2 ventrals; ratio of 1<sup>st</sup> to 2<sup>nd</sup> tarsomeres (fore, mid and hind legs), 90: 34, 130: 75, 80: 120. Hypandrium simple, without hook-like lobe; epandrial lobe stick-shape, with 3 apical cilia; cercus black or brown, sometimes yellow in basal half, without process, subtriangular, widened distally, angular ventrally and apically, right-angular dorsoapically, higher than long. Cercus 1/3 as long as epandrium, with marginal setae being as long as or slightly longer than cercus; outer setae straight, inner slightly curved.

*Distribution.* Congo (Kinshasa); Ivory Coast (!), South Africa.

#### 68. *Paracleius congoensis* (PARENT)

(Fig. 59)

*Type material examined.* ♀, Holotypus / Musée du Congo, Bangala: Gundji, 18.XI.1927, A. COLLART / R. Det. L 2414 / *Pelastoneurus congoensis* n.sp. Type. O. PARENT.

*Additional material examined.* 3♂♂, 2♀♀, Congo belge: Batama, 23 & 24.III, 1946, F.J. FRANÇOIS / R.I.Sc.N.B. I.G. 24452 [2♂♂ with additional label: Posées sur mare en forêt; 1♀ with additional label: Pose sur l'eau d'une mare en forêt; ISNB]; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, Aka/2, 22.V.1952 H. DE SAEGER, 3514 [RMCA];

*Description.* Male. Frons shining violet-black, weakly pollinose; face having black-brown ground colour, densely grey-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Upper postocular setae black, lower postoculars dirty white, the lowest seta black, very strong. Eyes with short hairs; face glabrous, with bulging clypeus, slightly narrowing in middle; face in middle slightly wider than height of postpedicel. Antenna 1/4 shorter than height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriad, with short distal setulae; postpedicel asymmetric, suboval, approximately as long as high, with rounded apex and microscopic hairs; stylus middorsal, black, with hairs 2-3 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 15: 6: 17: 15: 50. Palpus and proboscis yellow-brown, with short dark hairs; palpus with 1 short black seta.

Thorax mostly blue-black, mesonotum having 3 mat-black longitudinal stripes, grey pollinose; notopleura mat-black; pleura white pollinose. 6 strong

dorsocentral setae; 2 rows of acrostichals. Anterior slope of mesonotum covered with microscopic hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly yellow-brown; fore coxa orange; mid and hind coxae black, having orange apex; femora yellow-brownish, sometimes darker dorsally; fore and mid tibiae mostly orange yellow, brown at apex; hind tibia mostly orange-brown, black in distal 1/4 to 1/2; fore and mid tarsi black except brown base; hind tarsus entirely black. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 65: 115: 123: 57: 34: 20: 10: 13. Mid femur simple, with 2 anterior subapical setae. Mid tibia with 3-4 anterodorsal, 2 posterodorsal, 2 ventral at 1/3 and 2/3, and 4-5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 75: 143: 183: 70: 60: 48: 36: 21. Hind femur 6 times longer than high; with 1 anterodorsal seta at 3/4. Hind tibia with 3 anterodorsal, 3 posterodorsal, 3 apical, several weak ventral setae. Hind basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 45: 155: 195: 45: 70: 52: 36: 22.

Wing usually brownish, somewhat darker along costa; veins brown-black. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  almost straight, slightly convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 43: 9. Distal part of  $M_{1+2}$  almost straight, slightly convex posteriorly, joining costa far before wing apex.  $R_{4+5}$  and  $M_{1+2}$  gradually convergent. Crossvein *m-cu* straight, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 38: 28;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, whitish pollinose laterally. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, grey pollinose, suboval, narrowing distally, as long as 5<sup>th</sup> tergite, 1.5 times longer than high. Hypandrium broad, 5/8 length of epandrium, with middorsal and distal projections. Aedeagus thin, simple. Distoventral epandrial lobe short and thin, with 3 setae at apex. Postgonite shorter than surstyli, narrow, slightly curved ventrad. Surstylus black, with 2 lobes; ventral lobe narrow, somewhat widened before apex, with short apical seta; dorsal lobe of surstylus broad at base, pointed apically, with strong and long basodorsal pedunculate seta. Cercus black, oval, 1.5 times longer than wide, densely covered with long black cilia on inner side and along margin, with short hairs on outer side.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows. Clypeus reaching to lower margin of eyes; ratio of maximal width to minimal width to height of face, 30: 25: 60; postpedicel higher than long.

Length (mm): body 5.0, antenna 1.2, wing 4.7/1.6, hypopygium 1.7.

*Distribution.* Congo (Kinshasa).

*Diagnosis.* *P. congoensis* is closely related to *P. ambiguus*, differing in morphology of hypopygium and coloration of legs. Cercus rounded-oval, 1.5 times longer than wide, with brown-black marginal cilia, longer than width of cercus; fore femur brownish dorsally at apex; mid and hind femora brownish dorsally along entire length; fore tibia brownish; mid tibia brown except basal 1/3; hind tibia brownish in basal half and black in distal half. Notopleura with black spot; no prescutellar spot.

#### 69. *Paracleius dedegwa* GRICHANOV, spec. nov.

(Figs. 60-61)

*Holotype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Dedegwa, 17.V.1952, H. DE SAEGER, 3481 [RMCA].

*Description.* Male. Frons bluish-black, weakly pollinose; face brown, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, 2.3 times higher than wide under antennae, slightly narrowing at middle; ratio of its maximal width to minimal width to height, 22: 18: 50; face under antennae 1.3 times wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, with acute apex and short hairs, as long as high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 9: 5: 14: 10: 50. Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum violet-black, weakly grey pollinose; humeri brown; pleura black, whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae (broken) and several pairs of microscopic hairs between major setae.

Legs including coxae mostly yellow; mid coxa mostly brown externally; mid and hind tarsi brown from tip of basitarsus. Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3, and 2 apicodorsal setae; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 60: 98: 87: 48: 17: 12: 9: 10. Mid femur with 1 long and 1-2 short anterior setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup> tarsomere with two basoventral and two apicoventral setulae, 2<sup>nd</sup> segment with several apical setulae (other segments broken). Length ratio of mid coxa to femur to tibia to tarsus (segments first and second), 45: 135: 150: 58: 39. Hind

femur 4.2 times longer than high; with 1 anterodorsal seta at 6/7 and 1 elongate anteroventral subapical cilia. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, 3 ventral, 2 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-2<sup>nd</sup> tarsomeres each with apicoventral setulae (other segments broken). Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 38: 135: 185: 47: 63.

Wing evenly brownish; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  practically straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 38: 3.  $M_{1+2}$  having strong but gentle curvation towards  $R_{4+5}$  at 2/3 of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 32: 26. Posterior wing margin almost evenly convex, having shallow emargination at apex of  $CuA_1$ . Anal vein distinct; anal lobe narrow; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black, whitish pollinose laterally. 7<sup>th</sup> segment very short, no more than half as long as epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium black-brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, suboval, narrowing distad. Hypandrium broad, half as long as epandrium, having short hooklike lobe at base. Aedeagus thin, simple. Distoventral epandrial lobe broad, triangular, bearing a fan of about 6 apical cilia. Postgonite slightly shorter than surstyli, narrow, curved ventrad, rounded at apex. Surstylus light-brown, with 2 lobes; ventral lobe long, slightly swollen in basal 2/3, narrow distally, with a few short setulae at apex; dorsal lobe of surstylus narrow, half as long as ventral lobe, having a couple of apical setulae. Cercus mostly black, yellow at base, small, rounded-triangular, as long as high, with short simple black marginal setae.

Female unknown.

Length (mm): body 4.3, antenna 0.9, wing 4.3/1.5, hypopygium 1.2.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species is close to *P. collarti*, differing in cercus being rounded, having black simple cilia, and some other fine structures of hypopygium.

#### 70. *Paracleius didyensis* GRICHANOV, spec. nov.

(Fig. 62)

*Holotype*, ♂ [in alcohol], Madagascar: Didy, VI.1992, A. PAULY [ISNB].

*Description.* Male. Head as wide as high. Frons and face black, pollinose. One strong vertical seta arising from small mound at the top of head, one weak postvertical, a pair of strong ocellar setae found (all setae broken). Postocular setae black. Eyes with short hairs; face glabrous, with small clypeus, almost parallel-sided; ratio of its maximal width to minimal width to height, 17: 6: 40.

Antenna black, slightly shorter than height of head; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel asymmetric, suboval, 1.5 times longer than high, with right-angular apex and microscopic hairs; stylus middorsal, black, with hairs nearly as long as basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 8: 5: 17: 8: 38. Palpus and proboscis orange-brown, with short dark hairs; palpus with 1 short black seta.

Thorax black; 6 strong dorsocentral setae; 2 rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 lateral hairs. (All setae broken).

Legs mostly yellow; fore coxa yellow, brown at base; mid and hind coxae mostly brown-black, having yellow apex; hind femur with small brownish spot at extreme apex dorsally; apical segments of tarsi brown. Fore coxa with black hairs anteriorly and several black setae at apex; mid coxa with 1-2 strong external setae in addition to anterior hairs. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 3 posterodorsal, 2 apicodorsal setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 41: 68: 58: 37: 15: 12: 7: 8. Mid femur simple, with 1 strong anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 5-6 posterodorsal, 1 ventral and 4 apical setae. Mid tarsus broken. Length ratio of mid coxa to femur to tibia, 43: 95: 90. Hind femur 3 times longer than high, with 1 anterodorsal seta at 3/4. Hind tibia with 4 anterodorsal, 4 posterodorsal, several short ventral, 3-5 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-3<sup>rd</sup> segments of hind tarsus each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to third), 28: 90: 110: 32: 40: 31.

Wing almost evenly greyish; veins black. Costa simple.  $R_{2+3}$  straight;  $R_{4+5}$  slightly convex anteriorly at apex. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 37: 0.5. Distal part of  $M_{1+2}$  having angular curvation at 2/3, then forming gentle arc towards apex of  $R_{4+5}$ , joining costa far before wing apex. Crossvein *m-cu* straight, forming almost right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 22: 35;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein foldlike; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres orange.

Abdomen black. 7<sup>th</sup> segment 2/5 length of epandrium. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, weakly pollinose, as long as 5<sup>th</sup> tergite. Hypandrium extremely thin, simple. Aedeagus very thin, simple. Distoventral epandrial lobe fused with epandrium; 2 epandrial setae at base of hypandrium. Postgonite as long as surstyli, narrow, curved ventrad. Surstylus yellow, straight, with 2 lobes of equal length; ventral lobe narrow, pointed at apex, with 2 apical setulae; dorsal lobe of surstylus 2 times wider than ventral lobe, with 1 strong dorsolateral seta and 2 apical setulae. Cercus reddish-yellow, black at



apex, triangular, with pointed apex, 2 times longer than high, covered with short black cilia on inner side and along margin, with short hairs on outer side.

Female unknown.

Length (mm): body 3.7, antenna 0.9, wing 3.2/1.1, hypopygium 1.25.

*Distribution.* Madagascar.

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species keys out to *P. microproctus*, *P. bissindza* and *P. sanjensis*, differing in wing vein  $M_{1+2}$  having angular rather than gentle curvature; femora and tarsi yellow; femora simple; hypandrium extremely narrow; cercus triangular, with pointed apex.

### 71. *Paracleius diversifemur* (PARENT)

(Fig. 63)

*Type material examined.* ♀, Holotypus [red label] / Musée du Congo, Rutshuru, I.1934, Dr DE WULF / *Pelastoneurus diversifemur* n.sp. Type. O. PARENT [RMCA].

*Material examined.* 1♂, Coll. Mus. Congo, Terr. Rutshuru, VII.1937, Miss. Prophylactique / R. Det. 7632 [RMCA]; 1♂, Kenya: Kakamega forest, Isecheno stat., pump house trail, 25.VI.1995, afternoon, N 0°14.16', E 34°51.88', Leg.: Earthwatch team 4 [RMCA]; 1♂, Congo-belge, Eala, IX.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 [ISNB]; 1♂, 5♀♀, Cameroon, Rt. N9, 20 km E, Sangmelima [Rt N11, 20 km N Bamenda; Rt N4, 120 km NW Yaounde] 5-7.XI.1987, 17-24.XI.1987, A. FREIDBERG, Fini KAPLAN; 1♀, Uganda, S.W. Maramagambo Forest, 1900 m, 5.I.1996, I. YAROM & A. FREIDBERG; 1♂, Uganda, S.W. Ruwenzori Mts., Ibanda, 1900 m, 4.I.1996, I. YAROM & A. FREIDBERG [TAU]; 2♂♂, 9♀♀, Congo Belge: P.N.A., 26-28.VIII.1953, P. VANSCHUYTBROECK & V. HENDRICKS 4999-5005 / Secteur Tshiaberimu, Riv. Mbulikerere, affl. dr. Talia N, 2720 m; 2♀♀, Congo Belge: P.N.A., 7-15.VII.1955, P. VANSCHUYTBROECK 13274-309 / Mont Hoyo, 1270 m, sur plantes basses [ISNB]; 1♂, Congo Belge: P.N.A., 13-18.II.1953, P. VANSCHUYTBROECK & J. KEKENBOSCH, 2149-51 / Secteur Nord, Mutsora, 1100-1150, riv. N'Gokoi affl. Talia; 1♀, Congo Belge: P.N.A., 25.VI.1957, P. VANSCHUYTBROECK, VS-61 / Secteur Nord, riv. Butahu affl., Semliki, 1325m [ISNB]; 6♂♂, 10♀♀, Congo belge, Bambesa, 27, 30.VII, 11, 12, 24.VIII, 8.IX.1938, J. VRYDAGH / R. Mus. Hist. Nat. Belg. I.G. 12054, 11952 / P. VANSCHUYTBROECK det. 1951, *Chrysosoma pernigrum* Becker [ISNB]; 1♂, (Fernando Poo) Forêt, Rte. de Concepcion 4 km Après Carref. de Moka, Alt. 400 m, 13.XI.1970, L. MATILE rec.; 1♂, Cameroun, Yaoundé-N'Kolbisson, 20.VII.1967, L. MATILE rec., Forêt après midi / Museum Paris; ♂, Cameroun, N'Kolbisson, 26.X.1970, L. MATILE rec. / Bords chemins; 2♂♂, Cameroun, Rocher de N'Kolbisson, 27.VII.1967, L. MATILE rec. / Museum Paris; 3♂♂, Cameroun, N'Kolbisson, 31.X.1970, 4.XI.1970, L. MATILE rec.; 2♂♂, Camer-

oun, Ebolowa Nkuemvone, 280.VIII.1967, L. MATILE rec., Champs Semenciers / Museum Paris; 1♂, Rep. Centrafric., La Maboke, 4.X.1970, L. MATILE rec. / sur *Whitfieldia longifolia*; 1♂, Rep. Centrafric., La Maboke, 30.VII.1970, L. MATILE rec., Forêt; 1♂, Rep. Centrafric., La Maboke, 25.VIII.1967, L. MATILE rec.; 1♂, Ipassa Piste Panthère (Malaise), 11-16.V.1974 / Museum Paris, Gabon, Mission M. DONSKOFF et J. LE BRETON; 1♂, Côte d'Ivoire, Taï, 19-20.VIII.1978, G. COUTURIER leg. / Forêt dense, Sempervirente [MNHP]; 1♂, Ghana, Tafo, in tree buttress, 9.II.1969, O.W. RICHARDS, B.M. 1969-120 [BMNH]; 1♂, 1♀, Uganda: Budongo Forest, 7-8.II.1935, F.W. EDWARDS, B.M. 1935-203 [BMNH]; 1♂, 1♀, Sierra Leone, Lungi, 14.VII.1959, C.P. HOYT / C.I.E. Coll. No. 16707 / Pres. by Com. Inst. Ent., B.M. 1959-499 [BMNH]; 1♀, Angola (A30): 7 mls. W. Gabela, 16-18.III.1972 / Southern African Exp., B.M. 1072-1 [BMNH]; 22♂♀, C.I., W' Man, Zadéplén Cascades, Pont Liane, 7°25' N, 7°35' W, Bachbett, 8, 10 & 19.II.1998, leg. KASSEBEER & HILGER [ZIUK]; 2♂♀, C.I., NW' Man, Mont Tonkoui, 1000-1200 m, 11&21.II.1998, 7°21' N, 7°36' W, leg. KASSEBEER & HILGER [ZIUK]; 13♂♂, 6♀♀, C.I., 13 km N' Man, Cascades, 5-600 m, 7°30' N, 7°30' W, 20.II.1998, leg. KASSEBEER & HILGER [ZIUK]; 2♀♀, C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise 4, 22.II.-3.III.1998, leg. KASSEBEER & HILGER [ZIUK].

*Description.* Male. Frons black, whitish pollinose; face having black-brown ground colour, densely white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, narrowest at suture, with quite distinct suture; clypeus not reaching lower margin of eyes; face under antennae 1.5 times wider than height of postpedicel; ratio of its maximal width to minimal width to height, 17: 9: 40. Antenna black, sometimes more or less brownish; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel rounded, with oval apex, as long as high, with microscopic hairs; stylus middorsal, with hairs 3-4 times longer than basal diameter of stylus. Palpus small, black, with short hairs and 1 fine black seta. Proboscis brown, with short hairs

Thorax black, mesonotum weakly grey pollinose, pleura whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly, with 1<sup>st</sup> seta being very short; 4 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly dirty-yellow; mid and hind coxae dark-brown, having yellow apex; hind femur mostly black, widely yellow at base; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus brownish; mid and hind tarsi brown-black from tip of basitarsus. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal and several short apical setae; fore tarsus simple. Length ratio of fore coxa to femur to tibia

to tarsus (segments from first to fifth), 46: 75: 70: 38: 13: 10: 8: 10. Mid femur simple, with 1 anterior subapical seta, 1 anteroventral and 1 posteroventral subapical stiff cilia. Mid tibia with 2-4 anterodorsal, 2-4 posterodorsal, 1-2 dorsal, 2-3 ventral increasing in length distad and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several short apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 50: 105: 105: 50: 35: 27: 20: 10. Hind femur flattened laterally, 3 times longer than high; with 1 anterodorsal seta at 3/5 and 1 anteroventral subapical stiff cilia. Hind tibia with 3 anterodorsal, 3 posterodorsal, 3 apical and about 6 fine ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments of hind tarsus each with several short apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 36: 104: 140: 30: 50: 34: 21: 11.

Wing greyish, brownish in anterior half; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight, slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 35: 4. M<sub>1+2</sub> having strong curvation towards R<sub>4+5</sub> just behind middle of distal part, then forming gentle arc, being subparallel to R<sub>4+5</sub> at apex, joining costa before wing apex. Crossvein *m-cu* straight, forming right angle with M<sub>1+2</sub> and obtuse outer angle with CuA<sub>1</sub> longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 23: 36. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, brown at apex, with black setae. Halteres yellow.

Abdomen black, weakly pollinose; 3<sup>rd</sup>-5<sup>th</sup> tergites having small silvery-white lateral spots behind sutures. 6-7<sup>th</sup> segments very small, invisible. 7<sup>th</sup> segment as long as 6<sup>th</sup>, half as long as epandrium. 8<sup>th</sup> segment black, with long sparse black hairs and setae. Epandrium brown-black, grey pollinose, as long as 5<sup>th</sup> tergite. Hypandrium middorsal, simple. Aedeagus thin, concealed. Distoventral epandrial lobe fused with epandrium, short and broad, having 2 strong and long setae; 1 strong pedunculate epandrial seta at base of hypandrium. Postgonite narrow, as long as surstyli, slightly curved. Surstylus light-brown, straight, with 2 lobes having several setulae at apex; ventral lobe somewhat shorter and narrower than dorsal lobe of surstylus. Cercus light-brown, small, suboval, twice longer than wide, with acute apex and black marginal hairs nearly as long as width of cercus.

Length (mm): body 2.3-3.4, antenna 0.8-0.9, wing 2.3-3.4/0.8-1.2, hypopygium 0.4.

*Distribution.* Congo (Kinshasa); Ghana; Sierra Leone (!), Cameroon (!), Equatorial Guinea (Bioko I.) (!), Central African Republic (!), Gabon (!), Ivory Coast (!), Kenya (!), Uganda (!), Angola (!).

*Diagnosis.* PARENT (1935: Figs. 21-22) has described the species by a female. However, *P. diversifemur* is well distinguished by 4 rows of acrostichal setae. Antenna entirely black-brownish; postpedicel as long as high, with rounded apex; stylus plumose, with very long hairs. Hind femur black, narrowly yellow at both apices; mid tibia usually with 3 ventral setae. Hypopygium mor-

phology is rather similar to that in *P. echinatus*.

## 72. *Paracleius diversipes* (PARENT)

*Material examined and described.* ♂, Cameroun, Yaoundé-N'Kobilsson, 8.VIII.1967 / L. MATILE rec. / Museum Paris.

*Description.* Male. Frons black, grey pollinose; face having black-brown ground colour, densely whitish pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, narrowest at suture, with quite distinct suture; clypeus not reaching lower margin of eyes; face under antennae 1.5 times wider than height of postpedicel; ratio of its maximal width to minimal width to height, 17: 9: 37. Antenna black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel rounded, with oval apex, as long as high, with microscopic hairs; stylus middorsal. Palpus and proboscis small, black, with short hairs.

Thorax black, weakly grey-whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly, with 1<sup>st</sup> seta being very short; 2 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly dirty-yellow; mid and hind coxae dark-brown, having yellow apex; hind femur black except apices; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus brownish; mid and hind tarsi brown-black from tip of basitarsus. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal and several short apical setae; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 70: 61: 30: 10: 8: 6: 8. Mid femur simple, with 1 anterior subapical seta, 1 anteroventral and 1 posteroventral subapical stiff cilia. Mid tibia with 2-3 anterodorsal, 2-3 posterodorsal, 1 dorsal, 1 ventral at middle and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several short apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 41: 90: 90: 43: 28: 28: 15: 12. Hind femur flattened laterally, 3 times longer than high; with 1 anterodorsal seta at 7/10 and 1 anteroventral subapical stiff cilia. Hind tibia with 3 anterodorsal, 3 posterodorsal, 3 apical and about 5 fine ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments of hind tarsus each with several short apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 95: 110: 30: 40: 30: 20: 11.

Wing greyish, brownish in anterior half; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight, slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 30: 4. M<sub>1+2</sub> having strong curvation towards R<sub>4+5</sub> just behind middle of distal part, then forming gentle arc, being

subparallel to  $R_{4+5}$  at apex, joining costa before wing apex. Crossvein *m-cu* straight, forming right angle with  $M_{1+2}$  and obtuse outer angle with  $CuA_1$  longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 21: 36;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres orange-yellow.

Abdomen black, weakly pollinose; 3<sup>rd</sup>-5<sup>th</sup> tergites having small silvery-white lateral spots behind sutures. 6-7<sup>th</sup> segments invisible. Hypopygium morphology is practically identical to that in *P. diversifemur*.

Female. See description by PARENT (1934: Fig. 50).

Length (mm): body 3.0, wing 2.8/1.0, hypopygium 0.5.

*Distribution*. Sierra Leone; Cameroon (!).

*Diagnosis*. *P. diversipes* is closely related to *P. diversifemur*, differing in having biseriate acrostichal setae. Hind femur is mostly black, at most yellow in basal 1/3; mid tibia is having 1 ventral seta.

### 73. *Paracleius dobronosovi* GRICHANOV, spec. nov.

(Figs. 64-65)

*Holotype*, ♂, Cameroun, Ebolowa-Nkuemvone, 22.VIII.1967 / L. MATILE rec., Rocher d'Akouahas / Museum Paris [MNHP].

*Paratype*, ♂, Coll. Mus. Congo, Kasongo, IX.1959, P.L.G. BENOIT / R. Det. 7631c [RMCA].

*Description*. Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, 3.6 times higher than wide under antennae, almost parallel-sided, slightly narrowing at suture; ratio of its maximal width to minimal width to height, 17: 10: 41; face under antennae 1.5-1.7 times wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, as long as high at base, with acute apex and short hairs; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 8: 4: 10: 6: 38. Palpus and proboscis small, orange-brownish or orange-yellow, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly grey pollinose; humeri brown; pleura black, whitish pollinose. 5-6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly brown externally; mid and hind tarsi brown from tip of basitarsus. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal setae, and 1 fine apicoventral seta, half as long as basitarsus; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 43: 75: 61: 34: 12: 6: 6: 7. Mid femur with 1 longer and 1 shorter anterior and 1 posteroventral subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 38: 98: 95: 45: 31: 23: 15: 12. Hind femur 3.2 times longer than high, with 1 anterodorsal seta at 5/6 or 6/7 and 1 elongate anteroventral subapical cilia. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 26: 88: 115: 30: 47: 35: 20: 11.

Wing greyish, somewhat darker along costa; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  inconspicuously convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 27: 2.  $M_{1+2}$  having rather strong but gentle curvature towards  $R_{4+5}$  in middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 21: 23 (holotype) or 28: 23 (paratype). Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black; 2<sup>nd</sup>-5<sup>th</sup> tergites with large lateral spots of silvery-white pollination. 7<sup>th</sup> segment 2/5 length of epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium black-brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, suboval, narrowing distad, 2 times longer than high. Hypandrium with more or less distinct dorsal tooth, half as long as epandrium. Aedeagus thin, concealed. Distoventral epandrial lobe thin and long, with 3 apical setae; 1 epandrial seta at base of hypandrium. Postgonite thin, shorter than surstyli. Surstylus light-brown, curved, with 2 short lobes of equal length; ventral lobe having short thick apical seta; dorsal lobe of surstylus expanded distally, with several short setae at apex. Cercus mostly orange-yellow, widely black along margins, with long simple black marginal setae in outer row and shorter simple cilia in inner row, rounded-oval, slightly longer than high, incised along distal and ventral margins.

Female unknown.

Length (mm): body 3.0-3.5, antenna 0.8, wing 3.0/1.0, hypopygium 1.2-1.3.

*Distribution*. Cameroon, Congo (Kinshasa).

*Etymology*. The species is named for the Russian entomologist, Vitalii DOBRONOSOV.

*Diagnosis.* Having cercus simple, with simple setae, without inner process, the new species is close to *P. aeptus*, differing in antennal postpedicel being as long as high; and cercus being rounded, deeply incised along distal and ventral margins.

**74. *Paracleius donskoffi* GRICHANOV, spec. nov.**

(Fig. 66)

*Holotype*, ♂, Cameroun, Yaoundé-N'Kolbisson, 26.VII.1967, L. MATILE rec. / Museum Paris.

*Paratype*, ♂, [Gabon:] Ipassa Debarcadère, 30.IV-1-2.V.1974 / Piège de Malaise / Museum Paris, Gabon, Mission M. DONSKOFF et J. LE BRETON [NHMP].

*Description.* Male. Frons bluish-black, grey pollinose; face black-brown, densely white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, slightly narrowing at suture; ratio of its maximal width to minimal width to height, 16: 9: 37; face under antennae slightly wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, subtriangular, right-angular apicodorsally, with short hairs, 1.2 times as long as high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 10: 6: 18: 12: 37. Palpus and proboscis small, orange-yellow, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly grey pollinose; humeri brown; pleura black, whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly brown externally; mid and hind tarsi brown from tip of basitarsus. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal setae, and 1 fine apicoventral seta, half as long as basitarsus; 2<sup>nd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 68: 63: 28: 10: 8: 7: 6. Mid femur with 1 longer and 1 shorter anterior and 1 posteroventral subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 36: 89: 96: 45: 28: 23: 14: 10. Hind femur 3.1-3.4 times longer than high, with 1 anterodorsal seta at 3/4 or 5/6 and 1 elongate an-

teroventral subapical cilia. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2-3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 90: 120: 31: 51: 32: 20: 11.

Wing greyish, somewhat darker along costa; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 24: 3. M<sub>1+2</sub> having rather strong but gentle curvature towards R<sub>4+5</sub> in middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 21: 18. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black; 2<sup>nd</sup>-5<sup>th</sup> tergites with large lateral spots of silvery-white pollination. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium mostly black-brown, orange-yellow at apex, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, projected and narrowed distally, 2 times longer than high at middle. Hypandrium thin, 1/3 length of epandrium, having 3 dorsal teeth at base. Aedeagus thin, concealed. Distoventral epandrial lobe long and thin, with 2 short apical and 1 strong and long subapical setae; 1 short epandrial seta at base of hypandrium. Postgonite shorter than surstyli, narrow, pointed at apex. Surstylus light-brown, with 2 lobes; ventral lobe mostly concealed, swollen at base, narrow in distal part, with 1 strong ventral seta at base and 1 short apical seta; dorsal lobe of surstylus broad, rounded distally, with 2 short apical setae. Cercus mostly orange-yellow, black at apex, with long, partly hooked, black marginal setae in 2 rows distally and ventrally and small broad inner middorsal lobe covered with long hairs; cercus large, 2/3 length of epandrium, elongate-oval, nearly 3 times longer than wide, incised along ventral margin, with narrow apex.

Female unknown.

Length (mm): body 3.0, antenna 0.8, wing 3.0/0.9, hypopygium 1.2.

*Distribution.* Cameroon, Gabon.

*Etymology.* The species is named for one of the collectors.

*Diagnosis.* The new species is closely related to *P. leidenrothi* and *P. gabonensis*, differing in cercus being nearly 3 times longer than wide, abruptly narrowed in distal half, having broad foldlike inner middorsal lobe.

**75. *Paracleius echinatus* (STACKELBERG)**

(Fig. 67)

*Material examined.* ♂, [DR Congo:] S. L. Edouard: r. Rwindi (1000 m), 16.II.1936, L. LIPPENS, Parc Nat. Albert, 14 / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus diversifemur* PARENT [RMCA]; ♀, Congo belge: PNU, Mabwe (lac Upemba), 585 m, 4.IX.1947, Mis. G.W. de WITTE, 734a / P. VANSCHUYTBROECK det. 1952, *Hercostomus rhodesiensis* PARENT [ISNB]; ♀,

Embouch, Rutshuru, I. Edouard S., 18.I.1936, Dr. H. DAMAS, Parc Nat. Albert / P. VANSCHUYTBROECK det. 1951, *Hercostomus longipilus* PARENT [ISNB].

*Oriental material examined.* ♀, Batavia, I-23[?], E. JACOBSON / *Pseudohercostomus echinatus* STACKELBERG ♀, det. David HOLLIS, 1963 [ZMA].

*Diagnosis.* Having wing veins  $M_{1+2}$  and  $R_{4+5}$  slightly divergent in basal 2/3 of wing and parallel in distal 1/3, *P. echinatus* keys out to *pontifex-mottusi* group of species, differing in multiseriate acrostichal setae. However, the general habitus and hypopygium morphology demonstrate close relationship of the species to *P. diversifemur* and *P. diversipes*. Antennal scape partly brownish; postocular setae entirely black; 6 strong dorsocentral setae gradually decreasing anteriorly; anterior 2 dorsocentrals small, and 1<sup>st</sup> seta only slightly stronger than acrostichals; femora yellow; mid and hind femora strong, high, each with 1 strong anterior subapical seta; mid femur with additional anteroventral cilia; hind femur with row of several fine preapical anterodorsals; male tarsi simple;  $M_{1+2}$  inconspicuously convex anteriorly in distal 2/3 of distal part of vein; lower calypter with black cilia. 7<sup>th</sup> segment of abdomen reduced, membranous. Epandrium very small, rounded. Hypandrium 5/7 length of epandrium, simple. Aedeagus thin, concealed. Distoventral epandrial lobe large, broad, with 3 setae ventrally; 1 strong and long epandrial seta at base of hypandrium. Postgonite invisible. Surstylus with 2 lobes; inner lobe narrower and shorter, covered with outer lobe, with 1 short apical seta; dorsal lobe of surstylus broad, with 1 thick and several simple short setae at apex. Cercus small, as long as high, covered with short setae and long cilia, angular at apex. Otherwise see description by STACKELBERG (1931). Female similar to male except lacking male secondary sexual characters.

Length (mm): body 2.3, antenna 0.9, wing 2.8/1.0, hypopygium 0.7.

*Distribution.* Indonesia (Yawa); Congo (Kinshasa), ?Madagascar, ?Malawi.

#### 76. *Paracleius emasculatus* (PARENT)

(Fig. 68)

*Type material examined.* Holotype ♂, [DR Congo:] Eala, III.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 / *Pelastoneurus emasculatus* n.sp. Type. O. PARENT / Type [red label] / cf. Bul. Mus. Hist. Nat. Belg. XIII-18 (1937) p.3, pl. 2, fig. 11, 12.

*Material examined.* ♂, Congo-Belge, Eala, 11.IV.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482; ♂, Congo-Belge, Eala, 4.V.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 [ISNB]; 3♂♂, 1♀, C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise 4, 22.II.1998, leg. KASSEBEER & HILGER [ZIUK].

*Diagnosis.* The species is closely related to *P. confusibilis* (see diagnosis of the latter species). Postpedicel 1/4 longer than high; length ratio of scape to pedicel to postpedicel to stylus, 20: 12: 35: 110. Ratio of part of costa between

$R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 64: 5. Ratio of *m-cu* to distal part of  $CuA_1$ , 45: 67. All femora yellow; mid femur with 1-2 subapical setae; ratio of 1<sup>st</sup> to 2<sup>nd</sup> tarsomeres (fore, mid and hind legs), 70: 25, 100: 65, 70: 95. Hypandrium simple, without hook-like lobe; epandrial lobe stick-shape, with 3 apical cilia; cercus black, brown at base, without process, subtriangular, widest in middle, acute apically, 2 times longer than high. Cercus black, brown at base, more than half as long as epandrium, with black marginal setae being as long as width of cercus; outer setae straight, inner curved.

*Distribution.* Congo (Kinshasa), Ivory Coast (!), St. Helena.

#### 77. *Paracleius fernandopoensis* GRICHANOV, spec. nov.

(Figs. 69-70)

*Holotype*, ♂, [Equatorial Guinea:] (Fernando Po) Forêt, Rte. de Conception 4 km Après Carref. de Moka, Alt. 400 m, 13.XI.1970, L. MATILE rec. [MNHP].

*Paratype*, ♀, same label.

*Description.* Male. Frons shining violet; face mostly shining greenish-violet; clypeus whitish pollinose. One long and strong vertical at the top of head, one short postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Postocular setae black. Eyes with short hairs; face glabrous, slightly bulging at suture, almost parallel-sided; face in middle as wide as height of postpedicel, 2 times higher than wide; clypeus not reaching lower margin of eyes. Antenna as long as height of head; mostly brown-black; scape with long pointed inner apical process; pedicel short and high, internally convex anteriorly, with short distal and long dorsal setulae; postpedicel reddish-brown at base, subtriangular, with drawn-out apex and rather long hairs, 2.3 times as long as high at base; stylus basodorsal, black; 1<sup>st</sup> segment of stylus short and very thick; 2<sup>nd</sup> segment filiform, with hairs 2-3 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 13: 5: 30: 60. Palpus and proboscis small, brown, with rather long hairs; palpus with 1 short black seta.

Mesonotum metallic violet, weakly pollinose; pleura brown-black, brownish pollinose. 5 strong dorsocentral setae; acrostichals absent. Proepisternum with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae, 2 lateral and 2 inner marginal hairs.

Legs mostly yellow; fore coxa yellow; mid coxa mostly brown; hind coxa brown at base; last 2-3 segments of tarsi brownish. Femora without long hairs. Fore tibia with 2 dorsal, 2-3 apical setae; fore basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments each with short apicoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 35: 57: 57: 25: 12: 10: 8: 9. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 2 anterodorsal, 2 posterodorsal, 1 ventral and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup>

segments of mid tarsus each with 1 very short ventral seta. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 35: 78: 88: 36: 21: 16: 9: 8. Hind femur with 1 anterodorsal seta at 3/4. Hind tibia with 2 anterodorsal, 2 posterodorsal, 1 strong ventral, 2 apical setae. Hind basitarsus with 1 basoventral seta, half as long as basitarsus; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with 1 apicoventral setula. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 27: 63: 97: 24: 30: 19: 10: 9.

Wing brownish, veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 44: 15. R<sub>4+5</sub> and M<sub>1+2</sub> parallel. M<sub>1+2</sub> joining costa at wing apex. Crossvein *m-cu* convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 24: 17. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres yellow.

Abdomen mostly black-violet, densely grey pollinose, with large silvery-white lateral spot on 2<sup>nd</sup> tergite. 7<sup>th</sup> segment very short. 8<sup>th</sup> segment brown, with sparse fine dark cilia. Epandrium brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, cylindrical, nearly twice longer than high. Hypandrium brown, simple, 2/3 length of epandrium. Aedeagus thin, concealed. Distioventral epandrial lobe long, relatively broad, pointed at apex, with 2 ventral and 1 apical setae. Postgonite shorter than surstyli, narrow. Surstylus brown, with 2 straight lobes of equal length, each lobe having 1 dorsal and 1 apical strong setae. Cercus black, with long simple black marginal setae in addition to 1 extremely long and strong seta at apex; cercus narrow at base, broad in distal half, twice longer than wide, rounded at apex.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: antenna mostly brown; postpedicel light-brown at base, as long as high, with short pointed apex; face 1.4 times wider than height of postpedicel, 1.5 times higher than wide in middle; height of clypeus equal to at most 1/5 height of face as a whole; femora dirty-yellow or brownish dorsally at apex.

Length (mm): body 2.3, antenna 0.9, wing 2.8/1.0, hypopygium 0.7.

*Distribution.* Equatorial Guinea (Bioko I.).

*Etymology.* The species is named for the island of origin.

*Diagnosis.* *P. fernandopoensis* is close to *P. pontifex* and related species. However, having simple legs, the new species keys out to *P. mottusi*, differing in frons and face being shining violet, in body being black-violet and in morphology of hypopygium.

#### 78. *Paracleius funditor* CURRAN

(Fig. 71)

*Material examined.* 5♂♂, 3♀♀ [erroneously labelled as *P. afer*], S. Africa: Cape, #14, 17 km N of De Rust, 33°22' S, 22°33' E, 700 m, Date: 23.XI.1990, LONDT & WHITTINGTON, Meiringspoort area [NMP]; 2♀♀, South

Africa, Cape Mountain, Zebra Natl. Park, 1400 m, March 12, 1972, M.E. & B.J. IRWIN, 3225Ab [NMP].

*Diagnosis.* *P. funditor* is very close to *P. afer* (see diagnosis of the latter species) except as noted. Hind tibia entirely yellow; hind basitarsus yellow except apex; cercus subtriangular, angular ventrally, with long thin basodorsal process having short undulate hairs at apex; body length 4.75-5 mm.

*Distribution.* South Africa.

#### 79. *Paracleius gabonensis* GRICHANOV, spec. nov.

(Fig. 72)

*Holotype*, ♂ [in alcohol], Gabon: Ntoun, VIII.1985, A. PAULY, faucoir, [ISNB].

*Description.* Male. Frons bluish-black; face black. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, about 3 times higher than wide under antennae, slightly narrowing at suture; face under antennae 1.5 times wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in distal half, subtriangular, with acute apex and short hairs, 1.5 times as long as high at base; stylus middorsal, black, with hairs 1.5 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 9: 5: 15: 10: 37. Palpus and proboscis small, orange-yellow, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly grey pollinose; humeri brown; pleura black, whitish pollinose. 6 strong dorsocentral setae; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly brown externally; mid and hind tarsi brownish from tip of basitarsus. Fore tibia with 2 anterodorsal, 2 posterodorsal, 2 apicodorsal setae, and 1 fine apicoventral seta, half as long as basitarsus; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 44: 65: 61: 29: 11: 7: 6: 8. Mid femur with 1 longer and 1 shorter anterior and 1 posteroventral subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 34: 83: 94: 44: 28: 22: 16: 10. Hind femur 3.6

times longer than high, with 1 anterodorsal seta at 6/7, 1 elongate anteroventral subapical cilia and dorsal row of elongate setulae, at most half as long as diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 98: 108: 25: 46: 31: 21: 11.

Wing greyish, brownish in anterior half; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 25: 3. M<sub>1+2</sub> having rather strong but gentle curvature towards R<sub>4+5</sub> in middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 20: 21. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black. 8<sup>th</sup> segment brown-black, with rather long fine dark cilia. Epandrium blackish-brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, suboval, narrowing in distal half, 2 times longer than high. Hypandrium half as long as epandrium, narrow, having 2 dorsal teeth at base. Aedeagus thin, with preapical tooth. Distoventral epandrial lobe long, comparatively narrow, having 3 strong apical setae; 1 epandrial seta at base of hypandrium. Postgonite shorter than surstyli, narrow. Surstylus light-brown, curved, with 2 short, mostly concealed lobes of equal length having short setulae; ventral lobe narrow; dorsal lobe of surstylus broad, suboval. Cercus mostly orange-yellow, widely black along margins, with long black marginal setae in two rows; outer setae simple, about 8 inner setae hooked; cercus nearly half as long as epandrium, suboval, 1.4 times longer than wide, incised along distal and ventral margins, with short inner middorsal process in shape of boomerang.

Female unknown.

Length (mm): body 3.1, antenna 0.9, wing 2.9/1.0, hypopygium 1.0.

*Distribution.* Gabon.

*Etymology.* The species is named for the country of origin.

*Diagnosis.* The new species is related to *P. leidenrothi* and *P. donskoffi*, differing in cercus being short, shorter than half-length of epandrium, barely longer than wide, having short inner middorsal process in shape of boomerang.

#### 80. *Paracleius ineditus* (PARENT)

(Fig. 73)

*Type material examined.* ♂, Holotypus [red label] / [DR Congo:] Musee du Congo, Likimi (riv. Keto), 3.VIII.1922, A. COLLART / R. Det. A 2414 / *Pelastoneurus ineditus* n.sp. Type. O. PARENT.

*Material examined.* 1♂, Rep. Centrafric., La Maboke, 26.IX.1970, L. MATILE rec. [NHMP]; 1♂, Congo Belge: P.N.U., Lusinga (Galerie riv. Lus-

inga), 24.V.1945, G.F. DE WITTE: 31 / P. VANSCHUYTBROECK det. 19??, *Pelastoneurus pectinifer* PARENT [ISNB]; 1♂, Congo Belge: P.N.U., Riv. Kambi (affl. Kafwi), 25-27.VI.1945, G.F. DE WITTE: 164 / P. VANSCHUYTBROECK det. 1952, *Pelastoneurus pectinifer* PARENT [ISNB]; 1♂, Congo belge: Uele, Monga (Riv. Bili), 450 m, 18.IV-8.V.1935, G.F. DE WITTE: 1348 / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus confusibilis* PARENT [ISNB].

*Diagnosis.* Antenna mostly yellow-brownish; postocular setae entirely black; all femora yellow; mid femur with 2 anterior subapical setae; hind femur with row of anterodorsal setae, 1/3 width of femur; fore tibia with long apicoventral cilia, half as long as basitarsus; mid tibia with 2 ventral setae. Apical curved part of M<sub>1+2</sub> approximately as long as middle part (from *m-cu* to curvature); lower calypter with black cilia. Epandrium large, flattened laterally, suboval, narrowing distad, 2 times longer than high. Cercus slightly longer than wide, with inner row of distinctly widened and flattened marginal setae in distal part and longer hooked outer setae along distal and ventral margins; inner process of cercus located at basal 1/3, simple, short, at most half as long as cercus width, having short hairs and 1 short thick seta at apex.

*Distribution.* Congo (Kinshasa); Central African Republic (!).

#### 81. *Paracleius irinae* GRICHANOV, spec. nov.

(Figs. 74-75)

*Holotype*, ♂, [DR Congo:] Coll. Mus. Congo, Bafwasende: Batawa, 6.III.1946, Mr. FRANÇOIS [RMCA].

*Paratype*, ♂, Congo Belge, Batama, 23.III.1946, F. FRANÇOIS / Prés mare en forêt / RIScNB I.G. 24.452 [ISNB].

*Description.* Male. Frons mostly violet, black in middle, brownish pollinose in anterior half; face black, densely brownish pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black. Eyes with short hairs; face with sparse fine long hairs, glabrous under antennae. Face slightly bulging at suture, narrowest at upper 1/3, slightly widening towards palpi; face in middle being 2/3 as wide as height of postpedicel, 5 times higher than wide; clypeus not reaching lower margin of eyes. Antenna mostly reddish-orange; scape and pedicel simple; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in apical 1/2, triangular, pointed apically, as long as high, with rather long hairs; stylus positioned just before middle of dorsal side, black; 1<sup>st</sup> segment of stylus short and very thick; 2<sup>nd</sup> segment partly broken. Length ratio of scape to pedicel to postpedicel, 7: 5: 12. Palpus and proboscis small, brown, with short hairs; palpus with 1 short black seta.

Mesonotum metallic violet, grey pollinose; pleura brown-black, white pollinose. 5 strong dorsocentral setae; 2 irregular rows of short acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short light

hairs. Scutellum with 2 strong setae and regular row of 10-12 short marginal hairs.

Legs including coxae mostly yellow; mid coxa brown externally; fore and mid femora brownish dorsally in basal half; fore tibia and basitarsus silvery-white along dorsal and anterodorsal sides; fore tarsus with 2<sup>nd</sup>-5<sup>th</sup> segments mostly brown, 2<sup>nd</sup> segment having weak silvery reflection; mid tarsus whitish-yellow, shining silvery anteriorly; hind tarsus brown from tip of 2<sup>nd</sup> segment. Fore femur without long hairs. Fore tibia and basitarsus slightly thickened; fore basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments with short apicoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 74: 72: 33: 11: 8: 8: 9. Mid femur without anterior seta, with 1 posteroventral subapical seta and anteroventral and posteroventral rows of hairs, half as long as diameter of femur. Mid tibia with 2 anterodorsal, 1 posterodorsal in basal half, 1 ventral, 1-2 very long dorsal, 1-2 very long and 1-2 normal apical setae and 1 very long subapical anterodorsal cilia, at least half as long as tibia. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with 1 very short apicoventral seta; 1<sup>st</sup>-5<sup>th</sup> segments flattened; 1<sup>st</sup> strongly widened, 6 times longer than wide at base and 3 times longer than wide at apex; 2<sup>nd</sup> somewhat stronger widened, 2 times longer than wide in middle, suboval, with small apicoventral projection; 3<sup>rd</sup> segment slightly widened, 2 times longer than wide; basitarsus having 2 long fine ventral cilia at 1/3 and 2/3; 1<sup>st</sup>-2<sup>nd</sup> segments covered anteriorly with short light sparse hairs. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 45: 98: 100: 50: 28: 11: 12: 12. Hind femur with 1 anterodorsal seta at 3/5. Hind tibia with 2 anterodorsal, 3 posterodorsal, 1 strong ventral, 3 apical setae. Hind basitarsus with 1 strong basoventral seta, half as long as basitarsus; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with 1 apicoventral setula. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 98: 110: 30: 33: 18: 14: 12.

Wing mostly light-brownish, with hyaline transverse stripe just behind *m-cu*, as wide as *m-cu*; veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 34: 18. R<sub>4+5</sub> and M<sub>1+2</sub> parallel. M<sub>1+2</sub> joining costa at wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 25: 20. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres light-brown.

Abdomen mostly black-brown, densely grey pollinose, with large silvery-white lateral spot on 2<sup>nd</sup> tergite. 7<sup>th</sup> segment hardly visible, greatly reduced. 8<sup>th</sup> segment yellow, with sparse fine dark cilia. Epandrium yellow, large, as long as 2<sup>nd</sup>-5<sup>th</sup> tergites combined, cylindrical, 2 times longer than high. Hypandrium brown, narrow, simple, half as long as epandrium. Aedeagus thin, concealed. Distoventral epandrial lobe long, with 1 short seta at base, 1 dorsal and 1 subapical setae. Postgonite slightly shorter than surstyli, narrow. Surstylus yel-

low, straight, with 2 short lobes; ventral lobe longer than dorsal one, with short thick apical seta; dorsal lobe of surstylus broad and slightly excavated at apex, with 1 strong and long and 1 short apical setae. Cercus black, with simple black marginal setae, of which 2 distal setae strong, as long as cercus; cercus fabiform, twice longer than wide, with rounded apex.

Female unknown.

Length (mm): body 2.9, wing 3.3/1.1, hypopygium 1.0.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the Russian zoologist Dr. Irina KAIGORODOVA.

*Diagnosis.* The new species is closely related to *P. martius*, differing in 1<sup>st</sup> two segments of mid tarsus strongly widened, at least 2 times wider than next segment.

## 82. *Paracleius jasoni* GRICHANOV, spec. nov.

(Figs. 76-77)

*Holotype*, ♂, South Africa: Natal, Kosi Bay Nat. Reserve, 2632DD, 30.XI-2.XII.1982, LONDT, BARRACLOUGH & STUCKENBERG, Forest & open woodland areas [NMP].

*Paratype*, ♀, South Africa: Natal, Mseleni, 29.XI.1982, 2732BC, STUCKENBERG, BARRACLOUGH & LONDT, woodland/sandy area [NMP].

*Description.* Male. Frons as high as face, black, grey pollinose; face densely white pollinose. One long and strong vertical at the top of head, one shorter postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Postocular setae white, several upper postoculars black. Eyes with short hairs; face glabrous, very narrow, almost parallel-sided, 10 times higher than wide in middle; clypeus not reaching lower margin of eyes. Antenna positioned at middle of head, shorter than height of head; mostly orange-yellow; scape simple, with several black dorsal setulae; pedicel small, internally convex anteriorly, with short distal setulae; postpedicel brown-black in distal half, suboval, with narrow apex and short hairs, 1.7 times as long as high at base; stylus basodorsal, short, simple, black, with microscopic hairs. Length ratio of scape to pedicel to postpedicel to stylus, 7: 4: 15: 20. Palpus and proboscis small, yellow, with short hairs; palpus with 1 short yellow seta.

Thorax mostly yellow, weakly pollinose. Mesonotum mostly orange, having black longitudinal stripe, broad posteriorly and very narrow in anterior half of mesonotum; scutellum black dorsally. 6 pairs of dorsocentral setae with 5<sup>th</sup> seta short and shifted towards acrostichal row; acrostichals biseriate. Proepisternum with 1 strong white seta above fore coxa and several short white hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae yellow; last 2-3 segments of tarsi brownish. Femora without long hairs. Fore tibia with 2 anterodorsal, 2 posterodorsal, 2-3 apical



short setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 35: 53: 56: 30: 15: 10: 7: 6. Mid femur with 1 anterior subapical setae. Mid tibia with 2 anterodorsal, 2 posterodorsal, 2 very short posteroventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 28: 65: 84: 44: 20: 16: 12: 8. Hind femur 5 times longer than high, with 1 anterodorsal seta at 7/10. Hind tibia with 2-3 anterodorsal, 4 posterodorsal and 4 apical setae, without strong ventral setae. Hind basitarsus with 2-3 ventral setulae; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 20: 78: 94: 26: 30: 15: 12: 6.

Wing hyaline, veins yellow-brown. Costa simple.  $R_{2+3}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 21: 5.  $R_{4+5}$  slightly curved posteriad at apex.  $M_{1+2}$  having weak but distinct curvature at middle of distal part, then forming gentle arc, gradually converging to  $R_{4+5}$ , almost parallel to  $R_{4+5}$  at wing apex, joining costa just before wing apex. Crossvein *m-cu* positioned just before middle of wing, straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 10: 42. Posterior wing margin evenly convex. Anal vein fold-like; anal lobe narrow; anal angle absent. Lower calypter yellow, with black setae. Halteres orange-yellow.

Abdomen mostly orange-yellow, weakly pollinose; 2<sup>nd</sup>-5<sup>th</sup> tergites with small black lateral spots at base. 7<sup>th</sup> segment yellow, very short, 3/5 length of epandrium. 8<sup>th</sup> segment black, with sparse fine dark cilia. Epandrium black in basal half, yellow in distal half, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, semirounded, 1/3 longer than high. Hypandrium brown, narrow, simple. Aedeagus thin, simple. Distoventral epandrial lobe long, slightly swollen in basal half, with 2 setae at middle and 1 apical seta. Postgonite longer than surstyli, narrow, strongly curved ventrad. Surstylus yellow-brown, with 2 lobes; ventral lobe short and broad, with 3 long subapical setae; dorsal lobe of surstylus narrow, strongly curved, with a few setulae. Cercus yellow, long, narrow, nearly as long as epandrium, 5-6 times longer than wide at base, with short simple light hairs and setae along entire length.

Female. Similar to male except lacking male secondary sexual characters.

Length (mm): body 2.3, antenna 0.4, wing 2.2/0.7, hypopygium 0.7.

*Distribution.* South Africa.

*Etymology.* The species is named for one of the collectors, Dr. Jason LONDT.

*Diagnosis.* The new species is a sister species to *P. michaeli*, differing mainly in longer cercus being nearly as long as epandrium.

### 83. *Paracleius julius* GRICHANOV, spec. nov.

(Figs. 78-79)

*Holotype*, ♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/gc/18,

10.VII.1952 H. DE SAEGER, 3765 [RMCA].

*Paratypes*, 2♂♂, same label; ♂, Congo Belge: P.N.G., Miss H. DE SAEGER, PpK.9/g/9, 10.IX.1952 H. DE SAEGER, 4044 [RMCA].

*Description.* Male. Head as wide as high. Frons violet-black, weakly grey pollinose; face black, densely grey-whitish pollinose. One strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of strong ocellar setae on ocellar tubercle found. Upper postocular setae black, lower postoculars white, the lowest seta black. Eyes with short hairs; face glabrous, with slightly bulging clypeus, slightly narrowing towards clypeus; face in middle as wide as height of postpedicel, 3.2 times higher than wide. Antenna slightly shorter than height of head; scape and pedicel mostly orange, black dorsally; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, asymmetric, rounded-oval, as long as high, with rounded apex and microscopic hairs; stylus positioned at first 1/3 of dorsal side, black, with hairs 2-3 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 9: 5: 15: 10: 42. Palpus orange, grey pollinose, with short hairs and 1 short black seta; proboscis brown, with short dark hairs and pair of long cilia.

Thorax blue-black, whitish pollinose; mesonotum having mat-black longitudinal medial stripe and mat-black lateral spot above notopleura. 6 strong dorsocentral setae; 2 rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; fore coxa yellow; mid and hind coxae black, having yellow apex; fore and mid tarsi brown-black from tip of basitarsus; hind tibia brown at apex; hind tarsus black. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal short setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 53: 80: 81: 35: 18: 12: 8: 10. Mid femur simple, with 1 strong anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 4 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with 1-2 apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 50: 100: 119: 40: 30: 26: 18: 15. Hind femur 5.5 times longer than high; with 1 anterodorsal seta at 4/5. Hind tibia with 4 anterodorsal, 3 posterodorsal, 3-6 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 3<sup>rd</sup>-5<sup>th</sup> segments of hind tarsus broken. Length ratio of hind coxa to femur to tibia to tarsus (segments first and second), 35: 107: 133: 27: 46.

Wing mostly greyish, brownish in anterior half; veins black. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  slightly convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 36: 7. Distal part of  $M_{1+2}$  almost straight, weakly concave at first 1/3, joining costa just before wing apex.  $R_{4+5}$  and  $M_{1+2}$

gradually convergent. Crossvein *m-cu* straight, forming almost right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 25: 20;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres orange.

Abdomen bluish-black. 7<sup>th</sup> segment a little more than half as long as epandrium, having small sternite at apex of high tergite. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, weakly pollinose, as long as 5<sup>th</sup> tergite, elongate, 1.5 times longer than high at base, acute distally. Hypandrium broad, slightly narrowing at apex. Aedeagus thin, concealed. Epandrium at base of hypandrium with broad suboval right lobe covered with small denticles distally. Distoventral epandrial lobe long and narrow, bearing 3 long apical setae. Postgonite shorter than surstyli, relatively broad, rounded at apex. Surstylus brown, with 2 partly hidden lobes; ventral lobe long, slightly widened before apex, with 1 short apical and 1 long basoventral setae; dorsal lobe of surstylus with long spiniform basoventral process and 2 apical setae. Cercus black, long, 7/10 length of epandrium, oval, 3 times longer than wide, with excised margins, covered with long black cilia.

Female unknown.

Length (mm): body 3.6, antenna 0.9, wing 3.4/1.1, hypopygium 1.1.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named after the month July.

*Diagnosis.* The new species is very close to *P. vilkamaai*, differing in cercus having black rather than yellow ventral cilia and acute rather than rounded apex and other characters of hypopygium.

#### 84. *Paracleius kabasha* GRICHANOV, spec. nov.

(Figs. 80-81)

*Holotype*, ♂, Congo belge: P.N.A., Escarpem, de Kabasha, 1500 m, 14.XII.1934, G.F. DE WITTE, 919 / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus diversifemur* PARENT [ISNB].

*Paratypes*, 2♂♂, 1♀, same labels.

*Description.* Male. Frons black, grey pollinose; face having black-brown ground colour, densely grey-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, with small clypeus, narrowest at suture; clypeus not reaching to lower margin of eyes; face under antennae nearly as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 15: 5: 54. Antenna as long as height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae and 1 strong distodorsal seta, as long as pedicel; post-

pedicel subtriangular, with acute apex, as long as high, with microscopic hairs; stylus positioned at distal 2/3 of dorsal side, black, with hairs shorter than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 11: 5: 16: 17: 45. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Thorax dark-green, mesonotum weakly grey pollinose, pleura white pollinose. 6 strong dorsocentral setae decreasing in size anteriorly, with 1<sup>st</sup> seta being very short; 2 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short black hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly yellow; mid and hind coxae brown on outer side; hind knee brownish; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus black; mid and hind tarsi brown-black from middle of 2<sup>nd</sup> segment. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 2 posterodorsal setae; 1<sup>st</sup> and 2<sup>nd</sup> segments of fore tarsus inconspicuously thickened at extreme apex, having there light ventral pile of microscopic hairs; 3<sup>rd</sup> and 4<sup>th</sup> segment of the same tarsus each bearing long and wide flat anterior suboval lobe, 2 times longer than corresponding tarsomere; 5<sup>th</sup> tarsomere flattened dorsoventrally, having riblike anterior lobe. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 60: 95: 83: 85: 32: 19: 17: 11. Mid femur simple, with 2 anterior subapical setae. Mid tibia with 4 anterodorsal, 4 posterodorsal, 2 ventral and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several short apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 45: 116: 144: 78: 68: 50: 25: 15. Hind femur flattened laterally, 4 times longer than high; with 1 anterodorsal seta at 2/3; bare ventrally. Hind tibia with 5 anterodorsal, 4 posterodorsal, 3 apical and about 6 fine ventral setae. Hind basitarsus with 1 short basoventral seta; 3<sup>rd</sup>-5<sup>th</sup> tarsomeres broken. Length ratio of hind coxa to femur to tibia to tarsus (segments first and second), 40: 118: 165: 61: 81.

Wing greyish, brownish in anterior half; veins brown. Costa simple.  $R_{2+3}$  almost straight.  $R_{4+5}$  slightly convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 34: 4.  $M_{1+2}$  having gentle curvature towards  $R_{4+5}$  at middle of distal part, joining costa far before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 23: 29;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex, with very small excision at apex of  $CuA_1$ . Anal vein distinct; anal lobe broadened in basal half; anal angle acute. Lower calypter yellow, with black setae. Halteres orange-yellow.

Abdomen greenish-black, densely white pollinose laterally; 6-7<sup>th</sup> segments brown-black. 7<sup>th</sup> segment long and narrow, 2 times longer than 6<sup>th</sup>, 2/3 length of epandrium. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, trapezoidal, as long as 5<sup>th</sup> tergite, 1.5 times longer than high. Hypandrium bifurcated, with ventral lobe relatively broad, having long narrow middorsal tooth directed basad; dorsal lobe of hypandrium nearly reach-

ing apex of epandrium, swollen at middle, narrow at apex. Aedeagus thin, concealed. Distoventral epandrial lobe fused with epandrium, greatly expanded distally, having 1 short simple and 2 long, branched at apex, setae; 1 epandrial seta before epandrial lobe. Postgonite half as long as surstyli, narrow. Surstylus brown, long, glabrous; ventral lobe longer and thinner than dorsal one, securiform at extreme apex. Cercus black, with long light dorsal cilia, longer than cercus width; cercus large, more than half as long as epandrium, 1.5 times longer than wide, with rounded apices and small inner fold at basoventral apex bearing brush of long hairs.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: face wider, ratio of its maximal width to minimal width to height, 20: 14: 52; fore leg and wing simple; wing anal angle right.

Length (mm): body 3.8, antenna 1.0, wing 3.7/1.2, hypopygium 1.1.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species is a sister species to *P. maranguensis*, differing in cercus bearing long light cilia, longer than cercus width, and other male sexual secondary characters.

#### 85. *Paracleius kassebeeri* GRICHANOV, spec. nov.

(Fig. 82)

*Holotype*, ♂ [in alcohol], C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise, 4-22.II.1998, leg. KASSEBEER & HILGER [ZIUK].

*Description.* Male. Frons blue-green; face black, densely pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with microscopic hairs; face glabrous, slightly narrowing at suture; ratio of its maximal width to minimal width to height, 14: 12: 50; face under antennae 1.4 times wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in distal half, asymmetric, right-angular distodorsally, with short hairs, as long as high at base; stylus middorsal, black, with hairs 2-3 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 6: 3: 10: 6: 40. Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum violet-black; pleura black. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly brown; apical

segments of tarsi brown. Fore leg simple. Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3 and 2 apicodorsal setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 47: 71: 65: 36: 12: 10: 7: 8. Mid femur with 2 anterior subapical setae. Mid tibia with 3 anterodorsal, 4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 47: 106: 100: 45: 29: 23: 16: 10. Hind femur 2.8 times longer than high; with 1 anterodorsal seta at 8/9; 1 elongate anteroventral subapical cilia; and dorsal row of cilia, at most 1/3 as long as diameter of femur. Hind tibia with 3 anterodorsal, 4 posterodorsal, 1 subapical dorsal, 2-3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 35: 95: 118: 30: 50: 30: 22: 11.

Wing greyish; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 25: 3. M<sub>1+2</sub> having gentle but distinct curvature towards R<sub>4+5</sub> just behind middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 20: 29. Posterior wing margin almost evenly convex. Anal vein weak; anal lobe pronounced; anal angle right. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black. 4<sup>th</sup> tergite having 1 broad distoventral lobe on each side, nearly as long as 4<sup>th</sup> tergite (ventral view); 4<sup>th</sup> sternite subquadrate; 5<sup>th</sup> sternite represented by 2 small sclerites; 7<sup>th</sup> segment as long as 5<sup>th</sup> tergite and half as long as epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium blackish-brown, large, flattened laterally, asymmetric, suboval. Hypandrium 0.8 as long as epandrium, pointed apically, with 2 dorsal teeth. Aedeagus thin, with small tooth positioned far from apex. Distoventral epandrial lobe long, narrow, directed distad, with 3 setae at rounded apex; left ventral side of epandrium with single epandrial seta at base of hypandrium; right ventral side at middle with large projected lobe bearing one seta. Postgonite shorter than surstyli, narrow. Surstylus yellow, very small, with 2 lobes; ventral lobe with 1 apical and 1 dorsal short setae; dorsal lobe having 2 short dorsal setae. Cercus mostly black-brown, yellow in basal 1/3, with long simple black marginal setae in outer row and very short marginal hairs in inner row, large, elongate, 2 times longer than high, with pointed apex and inner basodorsal process covered with short hairs at apex.

Female unknown.

Length (mm): body 4.5, antenna 1.0, wing 3.8/1.2, hypopygium 1.7.

*Distribution.* Ivory Coast.

*Etymology.* The species is named after one of the collectors, Dr. C.F. Kassebeer.

*Diagnosis.* The new species is close to *P. abstrusus*, differing in simple

fore tarsus and fine structures of cercus (see key).

**86. *Paracleius leidenrothi* GRICHANOV, spec. nov.**  
(Figs. 83-84)

*Holotype*, ♂, [DR Congo:] Zaire, Prov. Kivu, Irangi, 850 m, Date: 20.XI-7.X.1993, leg. C. LEIDENROTH [SMNS].

*Paratype*, 1♀, same label.

*Description*. Male. Frons bluish-black, weakly brownish pollinose; face black, densely white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black. Eyes with short hairs; face glabrous, slightly narrowing towards clypeus; face under antennae as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 18: 10: 40; clypeus not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, securiform, right-angular apicodorsally, with microscopic hairs, 1.5 times longer than high at base; stylus positioned just before middle of dorsal side, black, with hairs 2-2.5 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 10: 7: 18: 13: 34. Palpus and proboscis small, brown, with short hairs; palpus with 1 short black seta.

Mesonotum metallic bluish-black, weakly pollinose; humeri brown; pleura black, grey-whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly black; mid tibia at apex and mid basitarsus at base brownish-yellow; hind tibia brownish in distal half; hind tarsus entirely black. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal setae, and 1 fine apicoventral seta, half as long as basitarsus; 1<sup>st</sup> and 2<sup>nd</sup> segments of fore tarsus simple (other segments broken). Length ratio of fore coxa to femur to tibia to tarsus (segments first and second), 50: 79: 69: 39: 11. Mid femur having 2-3 anterior and 1 posteroventral subapical setae, and anteroventral row of elongate setulae, at most half as long as diameter of femur. Mid tibia with 4 anterodorsal, 4 posterodorsal, 2 strong ventral at middle, and 4-5 apical setae. 1<sup>st</sup>-3<sup>rd</sup> tarsomeres each with apicoventral setulae (other segments broken). Length ratio of mid coxa to femur to tibia to tarsus (segments from first to third), 43: 103: 98: 48: 27: 25. Hind femur 3.8 times longer than high, with 1 anterodorsal seta at 6/7, 1 elongate anteroventral subapical cilia, and anterodorsal row of elongate setulae, 1/2 - 2/3 length of femur height. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2-3 strong ventral, 1 subapical dorsal and 2-3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres

each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 25: 100: 127: 30: 50: 35: 23: 10.

Wing evenly brownish; veins black. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 28: 3. M<sub>1+2</sub> having rather strong but gentle curvature towards R<sub>4+5</sub> in middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 22: 19. Posterior wing margin almost evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, white pollinose laterally. 8<sup>th</sup> segment black, with rather long fine dark cilia. Epandrium black-brown, lighter at apex, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, suboval, narrowing distad, 2 times longer than high. Hypandrium fused with epandrium at base, narrow, with 2 dorsal teeth at base and 1 apical tooth. Aedeagus thin, simple. Distoventral epandrial lobe long and narrow, with 1 strong subapical and 2 short apical setae; 1 epandrial seta at base of hypandrium. Postgonite slightly shorter than surstyli, narrow, slightly curved ventrad. Surstylus light-brown, with 2 mostly hidden lobes; ventral lobe narrow, with 1 short apical and 1 basoventral setae; dorsal lobe of surstylus rounded distally, with several dorsal setulae. Cercus mostly black, largely orange medially in basal 2/3, with 2 rows of black marginal setae distally and ventrally; outer setae simple, straight; inner setae hooked at apex; cercus suboval, large, nearly as long as epandrium, twice longer than wide, incised along distal and ventral margins, with short narrow inner basoventral process at 1/3 bearing several short hairs at apex.

Female similar to male except lacking male secondary sexual characters, otherwise as follows: face wider, almost parallel-sided; ratio of its maximal width to minimal width to height, 24: 20: 45; clypeus bulging; postpedicel orange in basal half, black distally, 1.4 times longer than high.

Length (mm): body 3.5, antenna 0.8, wing 3.3/1.0, hypopygium 1.26.

*Distribution*. Congo (Kinshasa).

*Etymology*. The species is named for the collector, C. LEIDENROTH.

*Diagnosis*. The new species is closely related to *P. donskoffi* and *P. gabonensis*, differing in cercus being suboval, 2 times longer than wide, having thin stick-shaped inner process at basal 1/3.

**87. *Paracleius lippensi* GRICHANOV, spec. nov.**  
(Figs. 85-86)

*Holotype*, ♂, [DR Congo:] Coll. Mus. Congo, Uelé: Gangala na Bodio, 15.IV.1936, L. LIPPENS, 138 / R. Det. 7631c [RMCA].

*Paratypes*, 8♂♂, Coll. Mus. Congo, Uelé: Gangala na Bodio, 14&15.IV.1936, L. LIPPENS, 138 & 139 / R. Det. 7631c / [1♂ with additional label:] P. VANSCHUYTBROECK det. 195?, *Pelastoneurus ineditus* PARENT

[RMCA]; 2♂♂, Coll. Mus. Congo, Uelé: Gangala na Bodio, 15.IV.1936, L. LIPPENS, 138 / R. Det. 7631c / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus confusibilis* PARENT [ISNB]; 2♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/le/8, 9.IX.1952, H. DE SAEGER, 4040; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, PpK.8/9, 15.VII.1952, H. DE SAEGER, 3792; 3♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/jc/9, 4.III.1952, H. DE SAEGER, 3161; 3♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Makpe/8, 5.XI.1951, H. DE SAEGER, 2718; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/ke/9, 12.X.1951, H. DE SAEGER, 2602; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, PpK/60/d/8, 18.XII.1951, H. DE SAEGER, 2924; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/gd/4, 8.II.1951, H. DE SAEGER, 1232; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/gc/8, 10.VII.1952, H. DE SAEGER, 3765; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, I/o/2, 5.X.1950, H. DE SAEGER, 808; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Morubia/8, 14.VI.1951, Réc. J. VERSCHUREN, 1931 [RMCA]; 1♂, C.I., W' Man, Zadépleu Cascades, Pont Liane, 7°25' N, 7°35' W, Bachbett, 8.II.1998, leg. KASSEBEER & HILGER [ZIUK].

*Description.* Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, slightly narrowing towards clypeus; ratio of its maximal width to minimal width to height, 16: 7: 47; face under antennae 1.5 times wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in distal half, elliptical, with oval apex and short hairs, slightly longer than high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 8: 5: 16: 11: 40. Palpus and proboscis small, orange-yellow, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly grey pollinose; humeri brown; pleura black, whitish pollinose. 5-6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly brown externally; fore tarsus orange-yellow, mid and hind tarsi brown-black from tip of basitarsus. Fore tibia with 1-2 anterodorsal, 2 posterodorsal, 2 apicodorsal setae, and 1 fine apicoventral seta, half as long as basitarsus; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 64: 80: 78: 38: 8: 6: 6: 5. Mid femur with 1 longer and 1 shorter anterior, 1 posteroventral subapical setae and elon-

gate ventral setulae in middle half, at most half as long as diameter of femur. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 49: 113: 112: 50: 35: 30: 22: 10. Hind femur 3.6 times longer than high; with 1 anterodorsal seta at 6/7; 1 elongate anteroventral subapical cilia; almost complete dorsal row of elongate setulae, at most half as long as diameter of femur, and ventral row of elongate hairs, at most 1/3 as long as height of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 35: 115: 138: 38: 52: 36: 25: 11.

Wing greyish; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 30: 3. Distal part of M<sub>1+2</sub> having rather strong but gentle curvature towards R<sub>4+5</sub> at 2/3, joining costa before wing apex. Crossvein *m-cu* straight or slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 23: 26. Posterior wing margin almost evenly convex, having shallow emargination at apex of CuA<sub>1</sub>. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black; 2<sup>nd</sup>-5<sup>th</sup> tergites with large lateral spots of silvery-white pollination. 7<sup>th</sup> segment 2/5 length of epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium blackish-brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, narrowing distally, nearly 2 times longer than high. Hypandrium middorsal, nearly half as long as epandrium, relatively narrow, having middorsal tooth. Aedeagus thin, projected, having ventral tooth far before apex. Distoventral epandrial lobe long and thin, with 1 strong and 2 fine apical setae; 1 epandrial seta at base of hypandrium. Postgonite half shorter than surstyli, narrow. Surstylus light-brown, curved, with 2 narrow lobes of equal length and width; ventral lobe with short apical setula and strong basoventral seta. Cercus mostly yellow, black along margins, with 2 rows of long black marginal setae; outer setae simple; inner setae flattened, widened and curved; cercus small, slightly longer than wide, incised distally and ventrally, with distinct distodorsal apex and long thin inner distodorsal process at 2/3.

Female unknown.

Length (mm): body 3.8, antenna 0.9, wing 3.5/1.2, hypopygium 1.7.

*Distribution.* Congo (Kinshasa), Ivory Coast.

*Etymology.* The species is named for one of the collectors, Dr. L. LIPPENS.

*Diagnosis.* The new species is closely related to *P. ineditus*, differing in cercus having straight setae in outer marginal row; inner process of cercus located in distal 1/3, nearly as long as cercus width.

# 88. *Paracleius machakos* GRICHANOV, spec. nov.

(Figs. 87-88)

*Holotype*, ♂, Kenya: Machakos, #91, Hunter's lodge, 02°12' S, 37°42' E, 960 m, Date: 30.XI.1992, A WHITTINGTON & J. LONDT, Hotel garden & lights [NMP].

*Description*. Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Lower postocular setae white, the lowest seta brownish, strong. Eyes with short hairs; face glabrous, 3 times higher than wide under antennae, slightly narrowing towards palpi; face under antennae as wide as height of postpedicel; clypeus not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, with acute apex and short hairs, as long as high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 5: 4: 11: 6: 32. Palpus and proboscis small, orange-yellow, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly pollinose; pleura greenish-black, grey pollinose. 5 strong dorsocentral setae; 2 rows of rather long acrostichals present. Proepisternum with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs including coxae mostly yellow; mid coxa brownish externally; last 2-3 segments of fore tarsus brownish; mid tarsus brown-black from tip of basitarsus; hind tibia brown at apex; hind tarsus black. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal setae and anterodorsal row of somewhat elongated setulae in distal half; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 35: 58: 58: 27: 14: 9: 7: 8. Mid femur with 1 anterior subapical seta, 1 anteroventral and 1 posteroventral subapical elongate cilia. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 strong anteroventral, 1 short posteroventral and 4 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 35: 75: 85: 42: 27: 22: 15: 10. Hind femur 4.4 times longer than high, with 1 anterodorsal seta at 3/4 and 1 elongate anteroventral subapical cilia. Hind tibia with 3 anterodorsal, 4 posterodorsal, 1 short ventral at 2/3, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 25: 80: 90: 32: 37: 26: 15: 10.

Wing almost hyaline, greyish along costa; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 23: 6. M<sub>1+2</sub> having weak sinuation

in middle third of its distal part, being parallel to R<sub>4+5</sub> at wing apex, joining costa just before wing apex. Crossvein *m-cu* almost straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 18: 26. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen greenish or bluish-black, whitish pollinose laterally. 7<sup>th</sup> segment 2/3 length of epandrium. 8<sup>th</sup> segment black, with rather long fine dark cilia. Epandrium black-brown, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, suboval, projected distoventrally, 2 times longer than high. Hypandrium basoventral, broad, 2/3 length of epandrium, having 2 long dorsal teeth at base. Aedeagus thin, concealed. Distoventral epandrial lobe short, with 2 strong apical setae. Postgonite slightly shorter than surstyli, narrow, curved ventrad, rounded at apex. Surstylus light-brown, with 2 narrow lobes; ventral lobe with 1 short thick apical seta; dorsal lobe of surstylus pointed at apex, with 1 long strong basodorsal and 1 short fine middorsal setae. Cercus mostly black, yellow in basal third, with sparse long simple black marginal setae distally and ventrally, small, suboval, nearly twice longer than wide.

Female unknown.

Length (mm): body 2.4, antenna 0.7, wing 2.6/0.9, hypopygium 0.8.

*Distribution*. Kenya.

*Etymology*. The species is named after the type locality.

*Diagnosis*. The new species is close to *P. micrurus* and *P. zamotailovi*, differing in characters of hypopygium mainly. Face 3 times higher than wide under antennae; face in middle narrower than height of postpedicel.

# 89. *Paracleius maranguensis* VANSCHUYTBROECK

(Figs. 89-90)

*Material examined*. 1♂, [DR Congo:] J. GUESQUIÈRE, Laloashi, 22.VI.1938 / R. Mus. Hist. Nat. Belg. I.G. 10482 [ISNB]; 2♂♂, 1♀, Uganda: S.W. Ruwenzori Mts., 5 km W Kilembe, 2500 m, 6.I.1996, I. YAROM & A. FREIDBERG [TAU]; 2♂♂, Uganda: Ruwenzori Range, XII.1934-I.1935, B.M. E. Afr. Exp. B.M. 1935-203 / Bwamba Pass (west side), 5500-7500 ft., F.W. EDWARDS [BMNH].

*Diagnosis*. *P. maranguensis* is specific in 3 distal segments of male fore tarsus being strongly widened and flattened. Antenna and postocular setae entirely black. All femora yellow; mid femur with 1-2 anterior subapical seta; hind basitarsus mostly yellow. Wing evenly greyish, brownish along costa; M<sub>1+2</sub> curved in apical part towards anterior wing margin; lower calypter with black cilia. Epandrium nearly 2 times longer than high; hypandrium deeply bifurcated; distoventral epandrium lobe very broad distally, having 2 distal pointed processes and 2 long simple setae. Male cerci looking like shell of nut coal, bearing short dark cilia, half as long as cercus width.

*Distribution.* Tanzania; Congo (Kinshasa) (!), Uganda (!).

**90. *Paracleius martius* GRICHANOV, spec. nov.**

(Figs. 91-92)

*Holotype*, ♂, [DR Congo:] Coll. Mus. Congo, Bafwasende: Batawa, 6.III.1946, Mr. FRANÇOIS [RMCA].

*Paratypes*, 3♂♂, 2♀♀, same label (1♂ with additional label: P. VANSCHUYTBROECK det. 195? *Thinophilus ochripalpis* BECKER).

*Description.* Male. Frons mostly violet, black in middle, brownish pollinose in anterior half; face black; epistome with greenish reflection, densely brownish pollinose; clypeus whitish pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black. Eyes with short hairs; face with numerous fine long hairs, glabrous under antennae. Face slightly bulging at suture, narrowest at upper 1/3, distinctly widening towards palpi; width of face in middle being 3/4 height of postpedicel; face 5.5 times higher than wide; clypeus separated from eyes, reaching lower margin of eyes. Antenna mostly reddish-orange; scape and pedicel simple; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in apical 1/2, triangular, acute-angular apically, as long as high, with rather long hairs; stylus positioned just before middle of dorsal side, black; 1<sup>st</sup> segment of stylus short and very thick; 2<sup>nd</sup> segment partly broken. Length ratio of scape to pedicel to postpedicel, 7: 5: 10. Palpus and proboscis small, brown, with short hairs; palpus mostly concealed, with 1 short black seta.

Mesonotum metallic violet-black, grey pollinose; pleura brown-black, white pollinose. 5 strong dorsocentral setae; 2 irregular rows of short acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and regular row of 10-12 short marginal hairs.

Legs mostly yellow; fore and hind coxae yellow; mid coxa with large brown external spot; hind femur in its distal half (dorsal view) and tibia at base brown; fore tarsus brownish from tip of basitarsus; mid tibia at apex and mid tarsus entirely white; hind tarsus dirty-yellow from 2<sup>nd</sup> segment; 5<sup>th</sup> segment of same tarsus whitish-yellow in distal half. Femora without long hairs. Fore tibia with 1 dorsal at 1/3, 2 short apical setae; fore basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments each with short apicoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 70: 65: 32: 11: 10: 8: 10. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 ventral and 5-6 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with 1 very short ventral seta; all segments flattened, of approximately equal width, as wide as tibia. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 44: 88: 100: 45: 26: 20: 12:

10. Hind femur with 1 anterodorsal seta at 3/5. Hind tibia with 2 anterodorsal, 4 posterodorsal, 3 apical setae. Hind basitarsus with 1 strong basoventral seta, half as long as basitarsus; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with 1 apicoventral setula. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 91: 104: 26: 33: 20: 13: 14.

Wing mostly brownish, with hyaline transverse stripe just behind *m-cu*, as wide as *m-cu*; veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 34: 18. R<sub>4+5</sub> and M<sub>1+2</sub> parallel. M<sub>1+2</sub> joining costa at wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 23: 17. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres brown.

Abdomen mostly black-brown, densely grey pollinose, with large silvery-white lateral spot on 2<sup>nd</sup> tergite and same but smaller spot on 4<sup>th</sup> tergite. 7<sup>th</sup> segment invisible. 8<sup>th</sup> segment yellow, with sparse fine dark cilia. Epandrium yellow, large, as long as 2<sup>nd</sup>-5<sup>th</sup> tergites combined, cylindrical, nearly 2 times longer than high. Hypandrium narrow, simple, half as long as epandrium. Aedeagus thin, concealed. Distoventral epandrial lobe long, with 1 short ventral, 1 apical and 1 subapical setae. Postgonite as long as surstyli, narrow. Surstylus yellow, straight, with 2 lobes; ventral lobe longer than dorsal one, with short apical and basal setulae; dorsal lobe of surstylus excised at apex, with 2 strong apical setae. Cercus black, small, suboval, with simple black marginal setae, of which 2-3 distal setae strong, as long as cercus.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: size slightly larger; postpedicel with right-angular apex; clypeus as high as wide, not reaching lower margin of eyes; mid tarsus dirty-yellow with 5<sup>th</sup> segment light-yellow; 9<sup>th</sup> hemitergite yellow, bearing marginal row of 5 short black acanthophorites.

Length (mm): body 2.9-3.2, wing 3.0-3.2/1.0-1.1, hypopygium 1.0.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named after the month March.

*Diagnosis.* The new species is a sister species to *P. irinae*, differing in 1<sup>st</sup>-2<sup>nd</sup> segments of mid tarsus being narrow, not wider than next segment.

**91. *Paracleius michaeli* GRICHANOV, spec. nov.**

(Figs. 93-94)

*Holotype*, ♂ South Africa: Natal Prov., Zululand, St. Lucia, 24.XI.1974, M.E. and B.J. IRWIN (2832Ad), coastal dune assoc., 8 m el. [NMP].

*Paratypes*, 2♂♂, 7♀♀, same label; 1♂, 1♀, South Africa: Natal, Zululand, St. Lucia, Estuary, 21.VII.1973, M.E. IRWIN, 2832Ad [NMP].

*Additional material.* 1♀, South Africa: Cape Prov., Umngazi Mouth,

3129Da, 20.X.1972, M.E. IRWIN, 3 to 10 m, coastal dunes [NMP].

*Description.* Male. Frons as high as face, black, grey pollinose; face densely white pollinose. One long and strong black vertical at the top of head, one shorter white postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Postocular setae entirely white. Eyes with short hairs; face glabrous, narrow, slightly narrowing towards clypeus, 9 times higher than wide in middle; clypeus not reaching lower margin of eyes. Antenna positioned at middle of head, as long as height of head; mostly orange-yellow; scape simple, with several black dorsal hairs; pedicel short, internally convex anteriorly, with short distal setulae; postpedicel brown-black in distal half, subtriangular, right-angular apically, as long as high at base, with short dense hairs; stylus basodorsal, black, short, glabrous. Length ratio of scape to pedicel to postpedicel to stylus, 8: 3: 8: 21. Palpus and proboscis small, yellow, with short hairs; palpus with 1 short yellow seta.

Thorax mostly yellow, weakly pollinose. Mesonotum mostly orange, having brown-black longitudinal stripe, broad posteriorly and very narrow in anterior half of mesonotum; scutellum black dorsally. 6 pairs of strong dorsocentral setae with 5<sup>th</sup> seta slightly shorter than others and shifted towards acrostichal row; acrostichals biseriate. Proepisternum with 1 strong white seta above fore coxa and several short white hairs. Scutellum usually with 2 strong setae (holotype having 1 left and 2 right strong setae), without lateral hairs.

Legs including coxae yellow; 5<sup>th</sup> segment of tarsi brownish. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2-3 short apical setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 30: 48: 48: 24: 13: 10: 7: 7. Mid femur with 1 anterior subapical setae. Mid tibia with 2 anterodorsal, 2 posterodorsal, 2 short posteroventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 31: 57: 65: 33: 22: 15: 8: 6. Hind femur 5 times longer than high, with 1 anterodorsal seta at 7/10. Hind tibia with 2 anterodorsal and 3 posterodorsal setae, 3 apical setae, without strong ventral setae. Hind basitarsus with 2 ventral setulae; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 22: 65: 75: 17: 30: 16: 10: 8.

Wing hyaline, veins yellow-brown. Costa simple. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 20: 3. R<sub>4+5</sub> slightly curved posteriorly at apex. M<sub>1+2</sub> having approximately 45° curvature at middle of distal part, then gradually converging to R<sub>4+5</sub>, subparallel to R<sub>4+5</sub> at wing apex, joining costa just before wing apex. Holotype having reduced M<sub>2</sub> as short stub-vein and weak fold on wing membrane; paratypes having only fold-like M<sub>2</sub> reaching to wing margin. Crossvein *m-cu* positioned at 1<sup>st</sup> 1/3 of wing, straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 7: 61. Posterior wing margin evenly convex. Anal vein fold-

like; anal lobe narrow; anal angle absent. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen mostly orange-yellow, having variously shaped black-brown spots, weakly pollinose; 1<sup>st</sup> tergite usually entirely yellow, sometimes brownish laterally; 2<sup>nd</sup> tergite anteriorly with more or less broad black transverse stripe; 3<sup>rd</sup> tergite having narrow transverse anterior stripe and adjacent medial subtriangular spot or having medial subtriangular spot anteriorly and 2 smaller spots laterally; 4-5<sup>th</sup> tergites mostly black dorsally, yellow laterally. 7<sup>th</sup> segment very short. 8<sup>th</sup> segment yellow, with sparse fine dark cilia. Epandrium mostly yellow, blackish basally, large, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, semirounded, 1/3 longer than high. Hypandrium narrow, simple. Aedeagus thin, simple. Distoventral epandrial lobe long, narrow, with 2 subapical and 1 apical setae. Postgonite slightly longer than surstyli, narrow, strongly curved ventrad, rounded at apex. Surstylus yellow, curved, with 2 lobes having short setulae at apex; ventral lobe somewhat shorter and thicker than dorsal one. Cercus yellow, small, 1/3 length of epandrium, 2 times longer than high at base, with long simple light hairs.

Female somewhat larger in size than male, similar to male except lacking male secondary sexual characters, otherwise as follows: face in middle half as wide as height of postpedicel; mesonotal medial stripe often diffused; 3<sup>rd</sup>-5<sup>th</sup> tergites mostly yellow, each usually having 3 dorsolateral black spots; the spots sometimes coalesced; oviscapt yellow, with pair of short ventral lobes; 9<sup>th</sup> hemitergite with 2 narrow black acanthophorites; cercus small, elongate, with 5-6 hairs as long as cercus.

Length (mm): body 1.7-2.6, antenna 0.5, wing 1.8-2.5/0.7-0.9, hypopygium 0.4.

*Distribution.* South Africa.

*Etymology.* The species is named for one of the collectors, Dr. Michael IRWIN.

*Diagnosis.* The new species is a sister species to *P. jasoni*, differing in shorter cercus being half as long as epandrium.

## 92. *Paracleius microproctus* PARENT

*Type material examined.* ♂, Holotypus [red label] / [DR Congo:] Musee du Congo, Elisabethville, 11.XI.1929, Dr. M. BEQUAERT / R. Det. L 2414 / *Paracleius microproctus* n.sp. Type. O. PARENT [RMCA].

*Diagnosis.* Antenna and postocular setae entirely black. Femora yellow, hind femur with large black dorsal spot; mid femur simple, with 1 anterior subapical seta; tarsi simple. M<sub>1+2</sub> with strong but gentle curvature, subparallel to R<sub>4+5</sub> at apex, reaching costa before wing apex; lower calypter with black cilia. Hypopygium smaller than 5<sup>th</sup> segment of abdomen, as long as 6<sup>th</sup> segment; distoventral epandrial lobe broad, with 2 apical setae; surstylus long and narrow,



subequal in length; postgonite narrow, as long as surstyli; cercus black, large, nearly half as long as epandrium, suboval, 2 times longer than high, with long simple setae. Body size 4.5 mm.

*Distribution.* Congo (Kinshasa).

### 93. *Paracleius micrurus* (PARENT)

(Fig. 95)

*Type material examined.* ♂, Holotypus (red) / [DR Congo:] Musée du Congo, Elisabethville, 11.XII.1928, Dr. M. BEQUAERT / R. Det. D 2414 / *Pelastoneurus micrurus* n.sp. Type. O. PARENT. ♂, Holotypus, Coll. Mus. Congo, Madagascar, Ambodivangy, XII.1949, J. VADON / P. VANSCHUYTBROECK det. 195?, *Paraclius vadoni* n.sp. [MNHP]; Paratype: ♂ [red label], / Coll. Mus. Congo, Madagascar, Ambodivangy, XII.1949, J. VADON / P. VANSCHUYTBROECK det. 1962, *Paraclius vadoni* n.sp. [RMCA].

*Material examined.* 2♂♂, Congo Belge: P.N.A., 19.VII.1954, P. VANSCHUYTBROECK & H. SYNAVE, 9204 / Massif Ruwenzori, Litongo, 1575 m; 1♂, Congo Belge: P.N.A., 14.II.1954, P. VANSCHUYTBROECK & J. KEKENBOSCH, 2124-25 / Massif Ruwenzori, Kalonge, 2010 m, Riv. Nyamwamba aff. Butahu [ISNB]; 1♂, Madagascar: Tam, Morarano-Chrome, VII.1991, A. PAULY col., forêt, 25 km W [ISNB, in alcohol]; 1♂, 1♀, Madagascar: Tam, Morarano-Chrome, 16-30.IX.1991, A. PAULY col., forêt, 25 km W [ISNB, in alcohol]; 1♂, Madagascar: 25 km W Morarano-Chrome, XI.1991, bac jaunes, A. PAULY [ISNB, in alcohol]; 1♀, Madagascar: Ambatondrazata, 22.IV.1992, A. PAULY [ISNB, in alcohol]; 2♂♂, Cameroun, Fumboy, 16.X.1970, L. MATILE rec. / Savane [MNHP]; ♂, Ethiopia: Gamo Gofa, Arba Minch Springs, 1300 m, 8.II.2000, I. YAROM & A. FREIDBERG [TAU]; 2♂♂, Uganda: Ruwenzori Range, XII.1934-I.1935, B.M. E. Afr. Exp. B.M. 1935-203 / Kilembe, 4500 ft., F.W. EDWARDS / *Pelastoneurus micrurus* PAR., det. C.E. DYTE, 1966 [BMNH]; 3♂♂, 3♀♀, Uganda: Budongo Forest, 7-8.II.1935, F.W. EDWARDS, B.M. 1935-203 / *Pelastoneurus micrurus* PAR., det. C.E. DYTE, 1966 [BMNH]; 1♂, Congo belge: P.N.G., Miss. H. DE SAEGER, II/le/8, 9.IX.1952, H. DE SAEGER, 4040 [RMCA]; 1♂, 1♀, Congo belge: P.N.A., riv. Rutshuru, près confl. Molindi, 1000 m (forêt-gal.), 15.V.1934, G.F. DE WITTE: 397 [ISNB]; 1♂, Congo belge: Kivu, Rutshuru (Buhanya), 1200 m, 6.VII.1935, G.F. DE WITTE: 1620 / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus emascuatus* PAR. [ISNB]; 1♂, Congo belge: Ruanda, Ruhengeri (Sources Kirii), 1800-1825 m, 31.VIII.1934, G.F. DE WITTE: 560 [ISNB]; 3♂♂, Congo belge: Ruanda, Ruhengeri (Riv. Penge), 1800-1825 m, 4 et 5.X.1934, G.F. DE WITTE: 668&675 / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus diversifemur* PARENT [ISNB]; 1♂, Congo Belge: P.N.A., 10.II.1953, P. VANSCHUYTBROECK & J. KEKENBOSCH, 2094-95 / Massif Ruwenzori, Kalonge, 2010 m, riv. Kama-horo, aff. Butahu [ISNB]; 1♂, Malawi: Viphia Mnts., Chikangawa, 1133 Dd, 5-

8.XII.1980, 1700 m, STUCKENBERG & LONDT, Forest edge & grassl. [NMP].

*Description.* Male. Frons bluish-black, grey or whitish pollinose; face black, densely whitish or silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Lower postocular setae mostly white or entirely black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, 2.0-2.5 times higher than wide under antennae, slightly narrowing in middle; face under antennae as wide as or slightly wider than height of postpedicel; clypeus not reaching lower margin of eyes. Antenna mostly orange-brownish or reddish-yellow; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, with acute apex and short hairs, slightly longer or 1.5 times longer than high at base; stylus middorsal, black, with hairs 1.0-2.0 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 5: 4: 12: 6: 36. Palpus and proboscis small, black, or orange-brownish, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly pollinose; pleura greenish-black, grey pollinose. 5-6 strong dorsocentral setae decreasing in size anteriorly, with 1<sup>st</sup> seta being very short; 2 rows of rather long acrostichals present. Proepisternum with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow; mid coxa brown; hind coxa dirty-yellow, brownish or dark brown; hind femur usually brownish dorsally; sometimes hind femur mostly black, widely yellow at both apices; last 2-3 segments of tarsi brown or hind tarsus brown-black from tip of basitarsus or hind tarsus entirely black. Femora without long hairs. Fore tibia with 1-2 anterodorsal, 2 posterodorsal, 1-4 short apical setae and anterodorsal row of somewhat elongate setulae in distal half; 2<sup>nd</sup>-5<sup>th</sup> segments of fore tarsus with somewhat elongate dorsal hairs; the hairs often invisible. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 31: 47: 47: 23: 7: 6: 5: 6. Mid femur with 1 anterior subapical seta, anteroventral and posteroventral subapical elongate cilia. Mid tibia with 3 anterodorsal, 2-3 posterodorsal, 1 strong anteroventral, 1 short posteroventral and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 35: 62: 67: 37: 22: 19: 13: 9. Hind femur slightly flattened laterally, 4.4 times longer than high, with 1 anterodorsal seta at 2/3 or 3/4 and elongate anteroventral subapical cilia. Hind tibia with 3-5 anterodorsal, 3-4 posterodorsal, 1 short anteroventral beyond middle or 1 ventral at 2/3, and 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 20: 78: 85: 28: 32: 22: 12: 9.

Wing almost hyaline, greyish along costa, sometimes more greyish; veins

brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  almost straight, slightly convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , from 25: 7 to 23: 4.  $M_{1+2}$  having weak sinuation in middle third of its distal part, being subparallel to  $R_{4+5}$  at wing apex, joining costa just before wing apex. Cross-vein *m-cu* almost straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , from 20: 21 to 20: 30. Posterior wing margin evenly convex. Anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen greenish or bluish-black, whitish pollinose laterally. 7<sup>th</sup> segment 2 times longer than 6<sup>th</sup>, 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium brown-black, grey pollinose, as long as 5<sup>th</sup> tergite, or larger, as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, sometimes projected distoventrally. Hypandrium fused with epandrium except apex, simple or having 1-2 low rounded dorsal lobes. Aedeagus thin, simple, concealed. Distoventral epandrial lobe long and narrow, with 2 apical and 1 dorsal subapical setae; 1 epandrial seta at base of hypandrium. Postgonite shorter than surstyli, narrow, curved ventrad, rounded at apex. Surstylus light-brown, curved, with 2 lobes, which swollen at base, narrow in distal part; ventral lobe with 1 apical and 2 basal setae; dorsal lobe of surstylus pointed, with 1 long strong middorsal seta. Cercus usually orange-brown, black along margins, or mostly black, yellow in basal third, with simple black marginal setae not longer or slightly longer than width of cercus, twice longer than wide, 1/3 length of epandrium, rounded at apex.

Female similar to male except lacking male secondary sexual characters.

Length (mm): body 2.4-3.5, antenna 0.7, wing 2.6-3.5/0.8-1.0, hypopygium 0.7.

**Diagnosis.** The species is rather variable in size and colour of different organs. Lower postocular setae mostly white or entirely black; face 2-2.5 times higher than wide under antennae; antenna mostly yellow-brownish; all femora yellow, hind basitarsus yellow or black; male tarsi simple;  $M_{1+2}$  gently curved towards  $R_{4+5}$ , with weak double curvation in its distal part, parallel to  $R_{4+5}$  at wing apex; cercus much shorter than epandrium, simple, usually orange-brown, black along margins, or mostly black, yellow in basal third; epandrial lobe long, stick-shaped.

**Distribution.** Congo (Kinshasa), Cameroon, Ethiopia, Uganda, Malawi, Madagascar.

**94. *Paracleius miripennis* GRICHANOV, spec. nov.**

(Figs. 96-97)

**Holotype**, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Anie/9, 29.VII.1952, H. DE SAEGER, 3843 [RMCA].

**Paratypes**, 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/ke/8, 12.II.1952, H. DE SAEGER, 3105; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, II/le/8, 9.IX.1952, H. DE SAEGER, 4040; 1♂, Congo Belge: P.N.G.

Miss H. DE SAEGER, PpK/60/d/8, 18.XII.1951, H. DE SAEGER, 2924; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Ndelele, 30.VII.1952, H. DE SAEGER, 3849; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Dedegwa, 21.V.1952, H. DE SAEGER, 3499; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, PFNK.7/9, 28.VII.1952, H. DE SAEGER, 3841 [RMCA]; 1♂, Congo Belge: Uele, Monga (Riv. Bili), 450 m, 18.IV-8.V.1935, G.F. DE WITTE: 1348 / P. VANSCHUYTBROECK det. 1951, *Pelastoneurus confusibilis* PARENT [ISNB].

**Description.** Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, 2.4 times higher than wide under antennae, slightly narrowing towards clypeus; ratio of its maximal width to minimal width to height, 16: 9: 38; face under antennae 1.3 times wider than height of postpedicel; clypeus small, slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black in distal half, subtriangular, with acute apex and short hairs, 1.4 times as long as high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 10: 4: 17: 10: 32. Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum violet-black, weakly grey pollinose; pleura black, whitish pollinose. 5-6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 microscopic lateral hairs.

Legs including coxae mostly yellow; mid coxa mostly brown; hind coxa brownish externally; hind tibia at apex and hind basitarsus at base brownish; mid and hind tarsi brown from tip of basitarsus. Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3, and 2 apicodorsal setae; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 40: 61: 60: 28: 10: 6: 5: 5. Mid femur with 1 long and 1 short anterior and 1 posteroventral subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 strong ventral at middle, and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 41: 90: 93: 38: 32: 27: 15: 11. Hind femur 3.5 times longer than high, with 1 anterodorsal seta at 5/6; 1 elongate anteroventral subapical cilia; dorsal row of cilia, at most half as long as diameter of femur; and ventral row of hairs, 1/3 as long as diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 subapical dorsal, 3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 25: 85: 109: 33: 45: 30: 17: 10.

Wing greyish; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  inconspicuously convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 21: 3.  $M_{1+2}$  having gentle but distinct curvation towards  $R_{4+5}$  just behind middle of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 20: 28. Posterior wing margin somewhat projecting at apex of  $CuA_1$ , so it seems to be straight or slightly concave between An and  $CuA_1$  and between  $CuA_1$  and wing apex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black, whitish pollinose laterally. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium black-brown, large, projected distally and ventrally, 2 times longer than high. Hypandrium short, excavated ventrally before apex, having short pointed process at base. Aedeagus thin, simple, concealed. Distoventral epandrial lobe fused with epandrium, long and thin, with 3 long and 1 short apical setae; 1 epandrial seta at base of epandrial projection. Postgonite slightly shorter than surstyli, narrow, curved ventrad, rounded at apex. Surstylus light-brown, curved, with 2 narrow lobes; ventral lobe with 1 thick apical and 2 simple basal setae; dorsal lobe of surstylus with 1 strong apical, 1 strong and 2 short dorsal setae. Cercus mostly black, orange at base, with long simple black setae along distal incised margin, simple, small, 3 times longer than wide, 1/3 length of epandrium, with somewhat drawn-out distodorsal apex.

Female unknown.

Length (mm): body 2.8, antenna 0.8, wing 3.0/1.0, hypopygium 1.2.

*Distribution.* Congo (Kinshasa).

*Etymology.* The Latin name of the species belongs to modified wing [(Lat. *mirus*, *penna*) 'with strange wing'].

*Diagnosis.* The new species is close to *P. collarti* and *P. bururi*, differing in posterior wing margin being somewhat projecting at apex of  $CuA_1$  and in morphology of hypopygium.

#### 95. *Paracleius miritarsus* GRICHANOV, spec. nov.

(Figs. 98-99)

*Holotype*, ♂, Angola (A26): Salazar, I.I.A.A., 9-15.III.1972 / Southern African Exp., B.M. 1072-1 [BMNH].

*Paratypes*, 2♂♂, 2♀♀, same labels; 1♂, 4♀♀, Angola (A11): Bruco, 26.II-3.III.1972 / Southern African Exp., B.M. 1072-1 [BMNH].

*Description.* Male. Frons and face black, densely white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, with small clypeus, narrowest at suture; face under antennae as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 16: 7: 47;

clypeus not reaching lower margin of eyes. Antenna as long as height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae and 1 strong distodorsal seta, as long as pedicel; postpedicel subtriangular, acute-angular apicodorsally, as long as high, with microscopic hairs; stylus positioned at distal 2/3 of dorsal side, black, with hairs shorter than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 11: 5: 15: 15: 38. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Thorax green-black, mesonotum grey pollinose, pleura white pollinose. 6 strong dorsocentral setae decreasing in size anteriorly, with first seta being very short; 2 rows of rather long acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short black hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs bicolorate, with coxae and femora black; trochanters and fore basitarsus yellow; tibiae mostly yellow; mid and hind tibiae blackish at apex; mid and hind basitarsi mostly yellow; mid and hind tarsi black from tip of basitarsus. Fore coxa with short black hairs anteriorly and 5-6 black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs and 2 apical setae. Fore femur without long hairs. Fore tibia with 4 anterodorsal, 2 posterodorsal setae; fore basitarsus slightly curved, flattened, with anterior row of elongate hairs in basal half, approximately as long as diameter of tarsomere, and ventral row of microscopic hooked hairs at extreme base; 2<sup>nd</sup>-5<sup>th</sup> segments flattened ventrally, with light pile; 3<sup>rd</sup>-5<sup>th</sup> segments having anterior row of elongate hairs, 1.5-2.0 times longer than diameter of tarsomeres. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 55: 80: 65: 60: 20: 15: 16: 31. Mid femur swollen ventrally in basal half, with 1 anterior subapical seta, posteroventral row of cilia in distal half, slightly longer than height of femur, and dense anteroventral comb of strong setulae in second quarter, 1/3 as long as height of femur. Mid tibia with dorsal/anterodorsal row of 6 strong setae and anterior row of numerous undulate, slightly curved setae, 4 times longer than diameter of tibia, 1 short ventral at 4/5 and 3-4 apical setae; distal 1/5 of mid tibia devoid of setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical seta. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 40: 95: 100: 70: 48: 38: 28: 14. Hind femur flattened laterally, 3 times longer than high; with 1 anterodorsal seta at 4/5; anterodorsal row of elongate setulae, at most half as long as height of femur; 1-3 long ventral cilia at base decreasing in length distad; and 1-3 elongate anteroventral cilia at apex. Hind tibia with 4 anterodorsal, 4 posterodorsal, 3 apical setae, without strong ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 103: 135: 55: 60: 39: 26: 13.

Wing evenly greyish, somewhat darker along costa; veins brown. Costa

simple.  $R_{2+3}$  almost straight.  $R_{4+5}$  slightly convex anteriad. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 30: 3.  $M_{1+2}$  gently curved towards  $R_{4+5}$  at middle of distal part, joining costa far before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 27: 26;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen dark-green, black along sutures, densely white pollinose laterally; 6-7<sup>th</sup> segments brown-black, white pollinose. 7<sup>th</sup> segment 2 times longer than 6<sup>th</sup>, 0.7 length of epandrium. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, large, trapezoidal, strongly projected ventrally. Hypandrium basoventral, narrow, simple. Aedeagus elbowlike, pointed at apex, with strong pointed hook at base. Distoventral epandrial lobe fused with epandrium, broad, with 4 ventral setae. Postgonite shorter than surstyli, broad, curved ventrad, acute at apex. Surstylus brown, with 2 strongly curved lobes; ventral lobe with 1 thick and 2 simple setae at apex; dorsal lobe of surstylus with 1 strong middorsal seta. Cercus black, with long black marginal setae distally, large, 2/3 length of epandrium, consisting of 2 parts; basal part smaller, having long inner process covered with hooked hairs at apex.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: face wider; ratio of its maximal width to minimal width to height, 23: 16: 49.

Length (mm): body 3.8, antenna 1.0, wing 3.2/1.0, hypopygium 1.3.

*Distribution.* Angola.

*Etymology.* The name of the species belongs to ornamented legs [(Lat. *mirus*, Gr. *tarsós*) 'with strange tarsi'].

*Diagnosis.* The new species is close to *P. afer*, *P. funditor* and *P. ngarukaensis*, differing in mid tibia having anterior row of numerous very long setae and in morphology of hypopygium.

#### 96. *Paracleius naglisi* GRICHANOV, spec. nov.

(Figs. 100-101)

*Holotype*, ♂, Congo Belge: P.N.G., Miss H. DE SAEGER, PFNK.7/9, 28.VII.1952 H. DE SAEGER, 3841 [RMCA].

*Paratypes*, 1♂, same label; 2♂♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/ke/8, 12.II.1952, H. DE SAEGER, 3105; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, Makpe/8, 5.XI.1951, H. DE SAEGER, 2718.

*Description.* Male. Frons black-violet, weakly pollinose; face having black ground colour, densely white pollinose. One strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Upper postocular setae black, lower postoculars

white, the lowest seta black, very strong. Eyes with short hairs; face glabrous, with slightly bulging clypeus, slightly narrowing in middle; face in middle slightly wider than height of postpedicel, 2.8 times wider than high. Antenna 1/4 shorter than height of head; scape and pedicel mostly orange, blackish dorsally; scape with short inner acute projection; pedicel short and high, internally convex anteriad, with short distal setulae; postpedicel mostly blackish, orange at base, asymmetric, subtriangular, approximately as long as high, with microscopic hairs; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 10: 7: 14: 9: 40. Palpus and proboscis yellow-brown, with short dark hairs; proboscis with pair of long black cilia; palpus with 1 short black seta.

Thorax mostly blue-black, whitish pollinose; mesonotum having 2 small mat-black spots above notopleura and above pteropleura and green-black longitudinal medial stripe, nearly as wide as distance between dorsocentral rows of setae; the stripe ending with mat-black prescutellar spot. 6 strong dorsocentral setae slightly decreasing in size anteriorly; 2 irregular rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several light hairs. Scutellum with 2 strong setae.

Legs mostly yellow; fore coxa yellow; mid and hind coxae black, having yellow apex; hind knee and hind tibia at apex darkened; fore and mid tarsi black from tip of basitarsus; hind tarsus black except for orange base of basitarsus. Fore and hind femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2-3 apical setae and 1 fine short apicoventral cilia. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 60: 93: 91: 45: 22: 16: 9: 10. Mid femur with 1 anterior subapical seta and ventral row of elongate hairs in basal half, 1/3 shorter than diameter of femur. Mid tibia with 3-4 anterodorsal, 2 posterodorsal, 3-4 ventral and 3-4 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fourth), 46: 115: 145: 47: 34: 26: 19. Hind femur 7 times longer than high; with 1 anterodorsal seta at 3/4. Hind tibia with 4 anterodorsal, 3 posterodorsal, 3-4 ventral and 3 apical setae. Hind basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 125: 140: 30: 48: 35: 24: 17.

Wing greyish, brownish along costa; veins brown-black. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  slightly convex anteriad.  $R_{4+5}$  slightly curved posteriad at apex. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 41: 5. Distal part of  $M_{1+2}$  slightly convex posteriad, joining costa just before wing apex.  $R_{4+5}$  and  $M_{1+2}$  gradually convergent. Crossvein *m-cu* straight, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 29: 25. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres

yellow.

Abdomen bluish-black, whitish pollinose laterally. 7<sup>th</sup> segment 2/3 height of epandrium. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, grey pollinose, rounded, with irregular margin distoventrally. Hypandrium pointed at apex, simple. Aedeagus thin, simple. Distoventral epandrial lobe fused with epandrium, short, having 4 setae. Postgonite short, straight, rounded at apex. Surstylus black, with 2 lobes; ventral lobe small, straight, with 2 short setae; dorsal lobe of surstylus large, strongly curved, swollen at apex, with 2 simple and 1 branched middorsal setae. Cercus black, elongate, swollen ventrally at base, 3 times longer than wide, 0.4 length of epandrium, covered with short hairs, with 5-6 long apical and subapical setae.

Female unknown.

Length (mm): body 3.7, antenna 0.9, wing 3.9/1.2, hypopygium 1.35.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the Swiss dipterologist, Dr. Stefan NAGLIS.

*Diagnosis.* The new species is a sister species to *P. neocongoensis*, differing in shape of male cercus and other structures of hypopygium.

#### 97. *Paracleius nebulo* PARENT

(Fig. 102)

*Type material examined.* ♀, Holotypus (red) / [DR Congo:] Musee du Congo, Mayumbe, Gandabuku, 4.VIII.1925, A. COLLART / R. Det. M 2414 / *Paracleius nebulo* n.sp. Type. O. PARENT [RMCA].

*Material examined.* 1♂, N. Vumba, S. Rhodesia, 8.IV.1965, D. COOKSON [NMP]; 1♂, N. Nigeria, Zaria Prov., Dumbi Wood., 25.X.1970, J.C. Deeming [BMNH]; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, Mabanga, 29.IX.1952, H. DE SAEGER, 4103 [RMCA]; 1♀, Tanganyika, Amani, 1957, J.C. HALCROW, in cattle shed, 50 / C.I.E. Coll., No. 15485 / Pres. by Com. Inst. Ent., B.N. 1969-3 [BMNH]; 1♀, Tanzania, East Usambara Mts., Amani, 1000 m, 20.VII.1980, M. STOLTZE & N. SCHARFF leg., Zool. Museum, København; 1♀, Tanzania, Uzungwa Mts, Mwanihana Forest above Sanje, 700 m, 10.IX.1984, M. STOLTZE & G.I. PETERSEN leg., Zool. Mus. Copenhagen; 2♀♀, Ethiopia: Gamo Gofa, Arba Minch Springs, 1300 m, 5.II.2000, I. YAROM & A. FREIDBERG [TAU].

*Description.* Male. Frons metallic green, whitish pollinose; face densely silvery white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Lower postocular setae white. Eyes with short hairs; face glabrous, narrow; face under antennae ¼ shorter than height of postpedicel; ratio of its maximal width to minimal width to height, 15: 5: 65; clypeus very small, not reaching lower margin of eyes. Antenna as long as head height; scape

and pedicel yellow; pedicel short and high, internally convex anteriad, with short distal setulae and 1 dorsal seta, as long as pedicel; postpedicel black, subtriangular, with acute apex and short hairs, nearly 2 times as long as high at base; stylus subapical, black, with hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus, 10: 6: 37: 54. Palpus and proboscis small, yellow-brownish, with short hairs; palpus with 1 short black seta.

Mesonotum metallic green, weakly pollinose, having large mat-black notopleural spots; scutellum blackish laterally at base; pleura greenish-black, white pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of rather long acrostichals present. Proepisternum with 1 strong black seta above fore coxa and several short black hairs. Scutellum with 2 strong setae, 2 medial and 2 lateral hairs.

Legs mostly yellow; fore coxa yellow; mid coxa black, having yellow apex; hind coxa brown-black externally; hind femur with small black spot at extreme apex dorsally; last 2-3 segments of fore tarsus brownish; mid tarsus black from tip of basitarsus; hind tarsus black. Fore tibia with 3 anterodorsal, 2-3 posterodorsal, without apical setae; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 50: 95: 90: 42: 16: 12: 8: 8. Mid femur with 1 anterior subapical seta and anteroventral row of setae in basal 2/3, 1/3 shorter than diameter of femur. Mid tibia with 3 anterodorsal, 3 posterodorsal, 2 strong anteroventral, 1 strong posteroventral and 5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 50: 115: 118: 50: 32: 27: 16: 11. Hind femur 3.6 times longer than high, with 1 anterodorsal seta at 4/5 and somewhat elongate anterodorsal setulae increasing in length distally. Hind tibia with 3-4 anterodorsal, 3-4 posterodorsal, row of short ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 40: 120: 158: 45: 65: 45: 22: 20.

Wing mostly hyaline, veins brown. Costa simple. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 47: 1. R<sub>4+5</sub> weakly convex anteriad. M<sub>1+2</sub> having angular curvature at 3/5 of its distal part, then forming gentle arc towards apex of R<sub>4+5</sub>, joining costa far before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 30: 46. CuA<sub>1</sub> not reaching to wing margin. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen dark-green, widely black along sutures, densely white pollinose laterally. 7<sup>th</sup> segment ½ length of epandrium and not longer than height of epandrium. 8<sup>th</sup> segment black, with fine dark cilia. Epandrium black, large, subrectangular, 1.5 times longer than high. Hypandrium basoventral, simple. Aedeagus thin, concealed, wavy dorsally. Distoventral epandrial lobe long, hav-

ing 2 simple and 1 pedunculate long subapical setae; 1 epandrial seta just before epandrial lobe. Postgonite as long as surstyli, narrow, swollen in middle, strongly curved ventrad, acute at apex. Surstylus yellow, with 2 lobes; ventral lobe with 3 short apical and subapical setae; dorsal lobe of surstylus with narrow pointed apex and 1 ventral setula. Cercus black-brown, covered with short simple black cilia, large, semi-oval, twice longer than wide, 2/3 length of epandrium.

Length (mm): body 4.0-4.6, antenna 1.2, wing 3.7-4.1/1.5, hypopygium 1.5.

*Distribution.* Congo (Kinshasa); Ghana, Nigeria (!), Ethiopia (!), Tanzania (!), Zimbabwe (!).

*Diagnosis.* PARENT (1933: Fig. 4) has described the species by a female. *P. nebulo* is similar to *P. bequaerti* known by females, differing in lower postoculars being entirely white and mid tibia having 3 antero- and 1 posteroventral setae.

**98. *Paracleius neocongoensis* GRICHANOV, spec. nov.**  
(Figs. 103-104)

*Holotype*, ♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/jd/11, 1.IX.1952 H. DE SAEGER, 4008 [RMCA].

*Paratypes*, 2♂♂, same label; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/gc/10, 11.XI.1951, H. DE SAEGER, 2882; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/gd/8, 13.XII.1951, H. DE SAEGER, 2901; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, Mabanga/8, 8.I.1952, H. DE SAEGER, 2998; 2♂♂, Congo Belge: P.N.G., Miss H. DE SAEGER, PFSK.17/d/10, 26.III.1952, H. DE SAEGER, 3224; 1♂, Congo Belge: P.N.G., Miss H. DE SAEGER, II/gc/8, 10.VII.1952, H. DE SAEGER, 3765.

*Additional material examined* [mostly damaged; with additional label: *Pelastoneurus congoensis* PARENT, det. GRICHANOV, 1999]. 246♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, [27.IX.1950, 9.II.1951, 6.III.1951, 12.III.1951, 31.III.1951, 4.V.1951, 25.V.1951, 31.V.1951, 18.VI.1951, 3.VII.1951, 12.VII.1951, 27.VII.1951, 9.VIII.1951, 21.VIII.1951, 7.IX.1951, 17.XI.1951, 19.XI.1951, 11.IX.1951, 20.IX.1951, 16.X.1951, 21.XI.1951, 24.IX.1951, 28.IX.1951, 5.X.1951, 20.X.1951, 11.XI.1951, 13.XI.1951, 17.XI.1951, 8.XII.1951, 12.XII.1951, 13.XII.1951, 17.XII.1951, 18.XII.1951, 28.XII.1951, 8.I.1952, 18.I.1952, 24.I.1952, 31.I.1952, 1.II.1952, 6.II.1952, 12.II.1952, 19.II.1952, 26.II.1952, 27.II.1952, 4.III.1952, 8.III.1952, 11.III.1952, 26.III.1952, 2.IV.1952, 10.IV.1952, 10.VI.1952, 24.VI.1952, 25.VI.1952, 4.VII.1952, 10.VII.1952, 16.VII.1952, 24.VII.1952, 2.VIII.1952, 4.VIII.1952, 6.VIII.1952, 8.VIII.1952, 14.VIII.1952, 16.VIII.1952,

18.VIII.1952, 1.IX.1952, 4.IX.1952, 9.IX.1952, 10.IX.1952, 16.IX.1952, 27.IX.1952, 29.IX.1952], H. DE SAEGER [RMCA].

*Description.* Male. Frons shining violet-black, weakly pollinose; face having black ground colour, densely white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Upper postocular setae black, lower postoculars white, the lowest seta black, very strong. Eyes with short hairs; face glabrous, with bulging clypeus, slightly narrowing in middle; face in middle 1.3 times wider than height of postpedicel, 2.6 times higher than wide. Antenna 1/4 shorter than height of head; scape and pedicel mostly orange, blackish dorsally; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, asymmetric, subtriangular, approximately as long as high, with microscopic hairs; stylus middorsal, black, with hairs 2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 11: 7: 17: 12: 40. Palpus and proboscis yellow-brown, with short dark hairs; proboscis with pair of long black cilia; palpus with 1 short black seta.

Thorax mostly blue-black, whitish pollinose; mesonotum having 2 small mat-black spots above notopleura and above pteropleura and green-black longitudinal medial stripe, as wide as distance between acrostichal rows; the stripe ending with mat-black prescutellar spot. 6 strong dorsocentral setae; 2 rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several light hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly dirty-yellow; fore coxa yellow; mid and hind coxae black, having orange apex; hind knee sometimes brownish; tarsi black from tip of basitarsus. Anterior four femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 50: 88: 92: 43: 22: 18: 10: 11. Mid femur simple, with 1 anterior subapical seta. Mid tibia with 3-4 anterodorsal, 2 posterodorsal, 2 anteroventral, 1 posteroventral and 3-4 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 53: 117: 141: 50: 53: 33: 24: 18. Hind femur 6.4 times longer than high; with 1 anterodorsal seta at 3/4 and several fine ventral hairs at base, at most as long as diameter of femur. Hind tibia with 4 anterodorsal, 3 posterodorsal, 3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 116: 150: 33: 55: 34: 25: 16.

Wing greyish, brownish along costa; veins brown-black. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight, slightly convex anteriorly; R<sub>4+5</sub> slightly curved posteriorly at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 40: 5. Distal part of M<sub>1+2</sub> almost straight, slightly convex posteriorly, joining costa far before wing apex. R<sub>4+5</sub> and M<sub>1+2</sub> gradually convergent. Cross-

vein *m-cu* straight, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 29: 23. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, whitish pollinose laterally. 7<sup>th</sup> segment ½ length of epandrium. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, grey pollinose, slightly longer than high, with irregular and asymmetric ventral margins (right ventral side is more simple than left one). Hypandrium short, having very narrow apex. Aedeagus thin, simple. Distoventral epandrial lobe short and thin, with 4 apical setae. Postgonite short, bifurcated. Surstylus brown, with 2 lobes; ventral lobe small, with 2 strong short setae and several setulae; dorsal lobe of surstylus large, expanded distally, with 2 short thick setae ventrally, 3 short hooked and 1 large branched dorsal setae. Cercus black, subtriangular, with drawn-out ventral and distal apices, 0.4 length of epandrium, covered with long and short black cilia; ventral lobe of cercus having long and strong apical seta.

Female unknown.

Length (mm): body 3.5, antenna 0.9, wing 4.1/1.2, hypopygium 1.2.

*Distribution.* Congo (Kinshasa).

*Etymology.* The name of the species indicates its similarity with *P. congoensis*.

*Diagnosis.* The new species is a sister species to *P. naglisi*, differing in shape of male cercus and other structures of hypopygium.

#### 99. *Paracleius ngarukaensis* VANSCHUYTBROECK

(Figs. 105-106)

*Type material examined.* Paratype: ♂, [Tanzania:] Ngaruka, 29.I-14.II.1952, D.O. Afrika Exp. / Paratype [red label] / P. VANSCHUYTBROECK det. 195? *Paraclius ngarukaensis* n.sp. / R.I.Sc.N.B. I.G. 22.942 [ISNB].

*Material examined.* 6 ♂♂, 1 ♀ [erroneously labelled as *P. caudatus*], Kenya: Baringo, #64, Lake Bogoria Nat. res., 00°11' N, 36°08' E, 1100 m, South end, 21.XI.1992, J. LONDT & A WHITTINGTON, Fig tree camp site [NMP]; 1 ♂, S. Africa: Pirie Dam, II.1944, J. OMER COOPER, B.M. 1948-276 [BMNH].

*Description.* Male. Frons black, densely white pollinose; face having brown ground colour, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black; the lowest seta very strong. Eyes with short hairs; face glabrous, with slightly convex clypeus, narrowest at suture; face in middle as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 21: 10: 55; clypeus not reaching lower margin of eyes. Antenna as long as height of head, black; scape

with short inner acute projection; pedicel short and high, internally convex anteriad, with short distal setulae and 1 strong distodorsal seta, as long as pedicel; postpedicel subtriangular, acute-angular apicodorsally, slightly longer than high, with microscopic hairs; stylus positioned at distal ¾ of dorsal side, black, with hairs shorter than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 16: 9: 20: 16: 46. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Thorax green-black, mesonotum grey pollinose, pleura white pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of rather long acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short black hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs bicolorate, with coxae and femora white pollinose; fore coxa yellow, blackish in basal ¼ to ½; mid and hind coxae brown with yellow apex; femora mostly black; fore femur yellow in distal ⅓; mid femur yellow at apex; fore tibia and tarsus almost entirely yellow; fore tibia at apex and basitarsus at base brown ventrally; mid tarsus black from tip of basitarsus; hind tarsus mostly black; hind basitarsus and base of 2<sup>nd</sup> segment yellow from anterior view. Fore coxa with short black hairs anteriorly and 5 black setae at apex; mid coxa with 1 strong external setae in addition to anterior hairs and 2 apical setae. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 2 posterodorsal setae; fore basitarsus slightly curved, flattened ventrally in distal ¾, with 1 short basoventral seta and group of microscopic hooked hairs in basal ¼; 2<sup>nd</sup>-4<sup>th</sup> segments flattened ventrally. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 65: 95: 75: 55: 25: 22: 17: 17. Mid femur flattened laterally, with 1 anterior subapical seta, posteroventral row of cilia in distal ⅓, not longer than height of femur, and dense anteroventral comb of strong setulae in basal ⅓, 1/3 as long as height of femur. Mid tibia with 4 anterodorsal, 4 posterodorsal, 1-2 ventral in second quarter and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 45: 125: 133: 75: 53: 40: 24: 16. Hind femur flattened laterally, 4 times longer than high; with 1 anterodorsal seta at 7/10; anterodorsal row of elongate setulae, at most half as long as height of femur; 3 ventral cilia in 2<sup>nd</sup> quarter decreasing in length distad; the longest basal cilia nearly as long as height of femur. Hind tibia with 4 anterodorsal, 4 posterodorsal, 3 apical setae, without strong ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 40: 122: 172: 61: 78: 50: 31: 18.

Wing evenly greyish, veins brown. Costa simple. R<sub>2+3</sub> almost straight. R<sub>4+5</sub> slightly convex anteriad. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 36: 4. M<sub>1+2</sub> gently curved towards R<sub>4+5</sub> at middle of distal part, joining costa far before wing apex. Crossvein *m-cu* slightly convex,

forming right angles with longitudinal veins; *m-cu* approximately equal in length to distal part of  $CuA_1$ ;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres with brown stem and yellow knob.

Abdomen dark-green, black along sutures, densely white pollinose laterally; 6-7<sup>th</sup> segments brown-black, white pollinose. 7<sup>th</sup> segment 2 times longer than 6<sup>th</sup>, 0.65 length of epandrium. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, large, nearly as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, trapezoidal, projected midventrally. Hypandrium strongly curved, bilobate. Aedeagus short, thick, having bifurcated hook in middle. Distoventral epandrial lobe fused with epandrium, broad, bearing 3 short setae; 1 epandrial seta at base of epandrial lobe. Postgonite as long as surstyli, slightly curved ventrad, rounded at apex. Surstylus brown, broad, with 2 lobes having short setae as figured. Cercus black, large, with long black marginal setae distally, having basal lobe and 2 thin processes as figured.

Length (mm): body 4.5, antenna 1.1, wing 3.9/1.1, hypopygium 1.8.

*Distribution.* Tanzania; Kenya (!), South Africa (!).

*Diagnosis.* *P. ngarukaensis* is close to *P. funditor* and *P. afer*, differing in mid femur having short anteroventral pile at extreme base rather than long pile along basal 1/2 or 2/3.

**100. *Paracleius nigeriensis* GRICHANOV, spec. nov.**  
(Fig. 107-108)

*Holotype*, ♂, N. Nigeria: Niger Prov., Mokwa, Zugurma, 29.VII.1971, J.C. DEEMING, Kurmi [BMNH].

*Paratype*, 1♀, same label; 6♂♂, 3♀, C.I., W' Abidjan, CSRS, Adiapo-Doumé, 5°21' N, 4°01' W, Malaise 4, 22.II-3.III.1998, leg. KASSEBEER & HILGER [ZIUK].

*Description.* Male. Frons bluish-black, whitish pollinose; face black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Postocular setae black, the lowest seta strong. Eyes with short hairs; face glabrous, 3 times higher than wide under antennae, slightly narrowing towards clypeus; ratio of its maximal width to minimal width to height, 20: 14: 42; face under antennae 1.4 times wider than height of postpedicel; clypeus slightly bulging, not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in distal half, subtriangular, with acute apex and short hairs, 1.3 times as long as high at base; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 13: 6: 18: 11: 40.

Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum bluish-black, weakly grey pollinose; humeri brown; pleura brown-black, whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Proepisternum with 1 strong black seta above fore coxa. Scutellum with 2 strong setae and 2 microscopic lateral hairs.

Legs including coxae mostly yellow (mid and hind tibia and tarsi broken in male holotype); mid coxa mostly brown; apical segments of tarsi brownish. Fore coxa with black hairs anteriorly and several rather long black setae at apex. Fore tibia with 2 anterodorsal at 1/3, 2 posterodorsal at 1/3 and 2/3, and 2 apicodorsal setae; 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus having ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 57: 73: 64: 42: 11: 10: 8: 7. Mid femur with 1 long and 1 short anterior subapical setae. Mid tibia with 3-4 anterodorsal, 1 dorsal, 4-5 posterodorsal, 2 ventral at middle and 5 apical setae. 2<sup>nd</sup> segment of mid tarsus 3/5 length of basitarsus. Hind femur 2.9 times longer than high; with 1 anterodorsal seta at 5/6; 1 elongate anteroventral subapical cilia; dorsal row of cilia increasing in length distad, at most half as long as diameter of femur. Hind tibia with 3 anterodorsal, 4 posterodorsal, 1-3 fine ventral and 3 apical setae. Hind basitarsus 3/5 length of next segment.

Wing greyish; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  inconspicuously convex anteriorly. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 33: 3.  $M_{1+2}$  having strong but gentle curvature towards  $R_{4+5}$  at 3/5 of its distal part, joining costa before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 24: 31. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen black, whitish pollinose laterally. 4-5<sup>th</sup> segments with strong marginal setae; 7<sup>th</sup> segment 3/5 length of epandrium. 8<sup>th</sup> segment black-brown, with rather long fine dark cilia. Epandrium blackish-brown, large, projected distally, 1.7 times longer than high. Hypandrium short, narrow, simple. Aedeagus thin, simple. Distoventral epandrial lobe long, with 3 long apical setae. Postgonite shorter than surstyli, narrow at apex, weakly curved ventrad. Surstylus light-brown, straight, with 2 lobes of subequal length; ventral lobe broadened at apex, with 2 strong setae and several setulae; dorsal lobe of surstylus with 2 dorsal setulae. Cercus mostly black, brownish at extreme base, with simple black setae and fine whitish hairs along ventral margin, large, 4 times longer than wide, 2/3 length of epandrium, with rounded apex.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: face almost parallel-sided; postpedicel as long as high.

Length (mm): body 3.6, antenna 1.0, wing 3.5/1.3, hypopygium 0.9.

*Distribution.* Nigeria, Ivory Coast.



*Etymology.* The species is named for the country of origin of the holotype.

*Diagnosis.* The new species is very close to *P. emasculatus* and *P. confusibilis*, differing mainly in bandlike cercus being gently convex ventrally, rounded at extreme apex.

**101. *Paracleius nigripalpis* GRICHANOV, spec. nov.**

(Figs. 109-110)

*Holotype*, ♂, Congo Belge: P.N.A., 11.III.1954, P. VANSCHUYTBROECK & H. SYNAVE, 7732-34 / Secteur Tshiaberimu, Kirungu (lieu-dit), 2720 m / Holotypus, *Pelastoneurus nigripalpis* B. COULIBALY [in coll., *Nomen Nudum*, ISNB].

*Paratypes*, 2♂♂, same first two labels.

*Description.* Male. Frons greenish-black, grey pollinose; face brown, densely white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Lower postocular setae white. Eyes with short hairs; face glabrous, almost parallel-sided; face in middle as wide as height of postpedicel, 2 times higher than wide under antennae; clypeus not reaching lower margin of eyes. Antenna brown-black; pedicel short and high, internally convex anteriad, with short distal setulae; postpedicel reddish-brown at base, subtriangular, with acute apex and short hairs, 1.6 times as long as high at base; stylus positioned just before middle of dorsal side of postpedicel; 1<sup>st</sup> segment of stylus black, microscopically haired; 2<sup>nd</sup> segment broken. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> segment of stylus, 9: 4: 18: 12. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-green, weakly pollinose; pleura greenish-black, whitish pollinose. 5 strong dorsocentral setae; 2 rows of rather long acrostichals present. Proepisternum with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow; fore coxa yellow; mid coxa brown externally; hind coxa brown at base; last 2-3 segments of tarsi brownish. All femora with somewhat elongate anteroventral hairs, at most half as long as diameter of femur. Fore tibia with 2 anterodorsal, 2 posterodorsal, 1 subapical dorsal, without apical setae; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 40: 64: 65: 34: 16: 10: 8: 9. Mid femur with 1 anterior subapical seta. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 strong anteroventral, 2 short posteroventral and 5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 40: 87: 97: 50: 25: 20: 14: 9. Hind femur 4.4 times longer than high, with 1 anterodorsal seta at 3/4. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 strong ventral at 2/3, 3 apical setae. Hind basitarsus with 1 basoventral seta, half as long as basitarsus; 1<sup>st</sup>-4<sup>th</sup>

tarsomeres each with 1 apicoventral setula. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 26: 88: 105: 30: 37: 23: 15: 9.

Wing almost hyaline, veins brown. Costa simple. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 29: 6. R<sub>4+5</sub> inconspicuously convex anteriad. M<sub>1+2</sub> having weak curvature at first 1/3 of its distal part, being parallel to R<sub>4+5</sub> at wing apex, joining costa at wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 21: 30. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres yellow.

Abdomen greenish-black, whitish pollinose. 8<sup>th</sup> segment black, with rather long fine dark cilia. Epandrium black-brown, large, projected distally, 1.5 times longer than high. Hypandrium arising just before middle of ventral side of epandrium, having basal and apical small dorsal teeth. Aedeagus thin, with small dorsal tooth far before apex. Distoventral epandrial lobe thin, with 3 long setae at apex. Postgonite shorter than surstyli, narrow, rounded at apex. Surstylus light-brown, slightly curved, with 2 narrow lobes; ventral lobe with 1 apical seta and small triangular basoventral tubercle; dorsal lobe of surstylus pointed at apex, with 1 strong basodorsal seta. Cercus black, long, 6 times longer than wide, 2/3 length of epandrium, with acute apex and long simple black marginal setae at apex and ventrally.

Female unknown.

Length (mm): body 2.5, wing 3.1/1.0, hypopygium 0.7.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the black palpi.

*Diagnosis.* The new species belongs to *P. micrurus* group of species, differing in having very long narrow cercus and small teeth on hypandrium and aedeagus.

*Remark.* The holotype of the new species has been previously labelled as "Holotypus: *Pelastoneurus nigripalpis* B. COULIBALY. I could not find any publication printed by this specialist with descriptions of this or other types deposited in the collection of ISNB. B. COULIBALY has made his postgraduate work on Afrotropical Dolichopodidae in the Voronezh State University under the leadership of Prof. O.P. NEGROBOV, who does not know published papers with description of *Pelastoneurus nigripalpis* (NEGROBOV, pers. com.). So, I consider the latter name as *nomen nudum*.

**102. *Paracleius obscoenus* (WIEDEMANN), comb.nov.**

*Material.* A male described by Loew (1860) and Becker (1923) has been examined in the collection of the Swedish Museum of Natural History, Stockholm: 1♂, Cap. B., Sp. / Kinb. / *Dolichopus obscoenus* Wiedem.

*Diagnosis.* Antenna black; postpedicel rounded oval, inconspicuously

higher than long, with indistinct apex dorsoapically; stylus middorsal, nearly 2 times longer than antenna, short pubescent; face silvery white, nearly parallel-sided, in middle as wide as height of postpedicel; clypeus 2/3 as long as epistome, separated from eyes, narrowing downward, with rounded apex far beyond lower eye margin; fore tibia with 2 antero- and 3 posterodorsals; fore basitarsus slightly shorter than 2<sup>nd</sup>-5<sup>th</sup> tarsomeres combined; 2<sup>nd</sup> segment of fore tarsus slightly thickened at apex; 3<sup>rd</sup> and 4<sup>th</sup> segments slightly but distinctly widened and flattened laterally, black; 5<sup>th</sup> segment black; mid femur with 2 subapical anterior setae, without ventral setae; mid tibia with 4 antero- and 4 posterodorsals, 2 ventrals; mid tarsus black from tip of basitarsus; hind femur high, with 1 anterior at 1/6, with black dorsal spot at apex; hind tibia blackish at apex, with 5 antero- and 5 posterodorsal, 5 hairlike ventral setae; hind basitarsus brown-black, with 1 ventral at 1/3; thorax and abdomen blue-black; pleura and abdominal tergites weakly whitish pollinose laterally; mesonotum with 6 dorsocentrals decreasing in length anteriorly; 2 rows of acrostichals; scutellum bare, with 2 strong and 2 short setae; wing brownish anteriorly and along M<sub>1+2</sub>, m-cu and CuA<sub>1</sub>; m-cu about equal in length to CuA<sub>1</sub>; M<sub>1+2</sub> with gentle curvature at middle, then almost straight; 4<sup>th</sup> section of costa not longer than 1/4 length of 3<sup>rd</sup> section; hypopygium and cerci black; cercus rhomboid, with black straight setae, of which apical setae approximately as long as height of cercus; about 4 mm.

*Distribution.* South Africa.

### 103. *Paracleius ogojaensis* (VANSCHUYTBROECK)

*Type material examined.* ♂, Holotypus [red label] / [Nigeria:] Ogoja, Nig., 31 Dec. 1960 / R.W. MEYER, A 5414 / Coll. Mus. Congo, don P. VANSCHUYTBROECK / P. Vans det. 195? *Pelastoneurus ogojaensis* n.sp. [RMCA].

*Diagnosis.* *P. ogojaensis* is a sister species to *P. upembaensis*, differing in fore tibia bearing 3 strong dorsal setae and ventral group of 15 very long undulate semierect black hairs in 3<sup>rd</sup> quarter, 2-3 times longer than diameter of tibia. All femora mostly black; fore femur with 6 ventral setae, longer than femur diameter; tibiae mostly yellow; postocular setae black.

*Distribution.* Nigeria.

### 104. *Paracleius olejniceki* GRICHANOV, spec. nov. (Figs. 111-112)

*Holotype*, ♂ [in alcohol], Madagascar: Ambatondrazaka, 22.IV.1992, A. PAULY [ISNB].

*Paratypes*, 6♂♂ [in alcohol], same label; 3♂♂, Madagascar: Didy, III.1992, A. PAULY [ISNB]; 1♂, Congo Belge: P.N.G. Miss H. DE SAEGER, I/b/2, 28.XII.1949, Réc. H. DE SAEGER, 74 [RMCA].

*Description.* Male. Head as wide as high. Frons greenish-blue, whitish pollinose; face densely silvery-white pollinose. One strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of strong ocellar setae on ocellar tubercle found. Postocular setae mostly white, a few upper postoculars black. Eyes with short hairs; face glabrous, narrowing towards palpi, with small clypeus; face under antennae as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 15: 7: 45. Antenna slightly shorter than height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with ring of short but strong distal setulae; postpedicel asymmetric, slightly longer than high, with distinct apex and microscopic hairs; stylus positioned at 2/3 of dorsal side, black, with hairs not longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 11: 5: 15: 7: 32. Palpus and proboscis small, black or brown, with short dark hairs; palpus with 1 short black seta.

Thorax mostly blue-green; mesonotum weakly whitish pollinose, having mat-black spot above notopleuron; scutellum mostly black dorsally; pleura white pollinose. 6 strong dorsocentral setae; 2 rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several short white hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly yellow; fore coxa yellow; mid and hind coxae black, having yellow apex; hind femur black at apex; apical segments of fore tarsus brown; mid tarsus black from tip of basitarsus; hind tarsus black. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 3 posterodorsal, 2-3 short apical setae. 4-5<sup>th</sup> segments of fore tarsus with ventral pile of microscopic light hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 45: 61: 62: 27: 12: 9: 7: 9. Mid femur simple, with 1 strong anterior and 1 posteroventral subapical setae and row of 4-5 black ventral setae in basal half, at most 2 times longer than diameter of femur. Mid tibia with 3 anterodorsal, 3 posterodorsal, 1 anteroventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 40: 90: 98: 45: 29: 24: 17: 11. Hind femur 3.7 times longer than high; with 2 anterodorsal setae in distal 3/4, elongate anterodorsal setulae and ventral row of setae, not longer than diameter of femur. Hind tibia with 3 anterodorsal, 4 posterodorsal, 3 apical setae, without strong ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments of hind tarsus each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 25: 92: 108: 38: 53: 32: 23: 13.

Wing almost hyaline; veins black. Costa simple. R<sub>2+3</sub> straight; R<sub>4+5</sub> slightly convex anteriorly at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 37: 1. Distal part of M<sub>1+2</sub> having angular curvature and fold-like stub-vein M<sub>2</sub> at 2/3, forming gentle arc towards apex of R<sub>4+5</sub>, join-

ing costa far before wing apex. Crossvein *m-cu* almost straight, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 19: 45; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres orange.

Abdomen bluish-green, black along sutures, whitish pollinose laterally. 7<sup>th</sup> segment short and broad, as long as height of epandrium. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, weakly pollinose, as long as 5<sup>th</sup> tergite. Hypandrium thick, bilobate in distal half. Aedeagus thick, with short and thin subapical process. Distoventral epandrial lobe long and thin, with 2 apical setae; 1 epandrial seta just before epandrial lobe. Postgonite slightly longer than surstyli, broad, deeply excavated apicoventrally, with small process at apex. Surstylus black, straight, with 2 lobes of equal length; ventral lobe with several apical and subapical setulae; dorsal lobe of surstylus with 1 long apical and 1 short subapical thick setae. Cercus black, suboval, 2 times longer than wide, as long as epandrium, densely covered with short light (at base) and dark cilia.

Female unknown.

Length (mm): body 3.4-3.7, antenna 0.9, wing 2.8-3.0/1.1, hypopygium 1.1-1.2.

*Distribution.* Madagascar, Congo (Kinshasa).

*Etymology.* The species is named for the Czech dipterologist, Dr. Jiří OLEJNÍČEK.

*Diagnosis.* The new species is close to *P. nebulo*, differing in antenna being entirely black; male cercus being large, elongate-oval, densely covered with short light (at base) and dark cilia.

#### 105. *Paracleius pectinifer* (PARENT)

(Fig. 113)

*Material examined.* 2♀♀, [DR Congo:] Musée du Congo, Ituri, Sesenge, Ndua (Faradji), 15.II.1930, A. COLLART / R. Det. C 2414 / *Pelastoneurus pectinifer* PAR. [det.] O. PARENT [RMCA]; 1♂, Rep. Centrafric., forêt gal. de M'Balé, 15.IX.1970, L. MATILE rec.; 2♂♂, Cameroun, Yaoundé-N'Kolbisson, 24.VII.1967, L. MATILE rec. / Museum Paris [NHMP]; 1♂, Sudan, Talango Forest, 550 m, Imatons Mts., 7.XII.1980, E. WEDERKINCH leg. [ZMA].

*Diagnosis.* *P. pectinifer* is close to *P. schoutedeni*, differing in male and female mid femur having anterior comb of 5-6 strong setae in apical half; hind coxa yellow; first and second segments of hind tarsus yellow; lower calypter with flattened setae. Antenna mostly yellow-brownish; postocular setae entirely black; all femora yellow; mid tibia with 4-5 ventral setae; M<sub>1+2</sub> curved in apical part towards anterior wing margin. Morphology of hypopygium is somewhat similar to that in *P. echinatus*. Epandrium nearly 1.5 times longer than high. Hypandrium less than half as long as epandrium, with very small subapical dor-

sal tooth. Aedeagus thin, with small subapical dorsal tooth. Distoventral epandrial lobe large, broad, with 2 strong setae; 1 strong and long seta on apex of epandrial projection at base of hypandrium. Postgonite as long as surstyli, narrow, slightly curved ventrad. Surstylus with 2 narrow lobes of equal length; ventral lobe with 2 setae; dorsal lobe of surstylus with 4 simple short setae. Cercus suboval, small, 2 times as long as high, less than half as long as epandrium, covered with short simple setae.

*Distribution.* Uganda; Congo (Kinshasa), Cameroon (!), Central African Republic (!), Sudan (!).

#### 106. *Paracleius pedunculatus* (PARENT)

(Fig. 114)

*Type material examined.* ♂, Holotypus [red label] / [DR Congo:] Musée du Congo, Elisabethville, R. Kimilobo, 17.IX.1928, Dr. M. BEQUAERT / R. Det. F 2414 / *Pelastoneurus pedunculatus* n.sp. Type. O. PARENT [RMCA].

*Material examined.* 1♂, Congo belge: Kivu, Rutshuru, 1285 m, 11.VII.1935, G.F. DE WITTE: 1637 / P. VANSCHUYTBROECK det. 1951, *Hercostomus par* PARENT [ISNB]; 1♂, Malawi: Ntchisi forest reserve, 1334Ac, 1500m, LONDT & STUCKENBERG, 3-4.XII.1980, Montane forest & woodland [NMP]; 67♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, 22.II.1951, 28.X.1951, 31.X.1951, 5.XI.1951, 19.XI.1951, 12.XII.1951, 18.XII.1951, 28.X.1951, 31.I.1952, 6.II.1952, 12.II.1952, 4.III.1952, 5.III.1952, 3.V.1952, 10.VI.1952, 4.VII.1952, 10.VII.1952, 1.IX.1952, 9.IX.1952, 27.IX.1952, 29.IX.1952, H. DE SAEGER [RMCA]; 1♂, Coll. Mus. Congo, Elisabethville (à la lumière), XI.1950, Ch. SEYDEL [RMCA].

*Diagnosis.* The species is most close to *P. collarti*. Antenna mostly yellow-brownish; postocular setae entirely black. All femora yellow; mid femur with 2 anterior subapical setae; fore tibia with very short apicoventral seta; mid tibia with 2 ventral setae. M<sub>1+2</sub> gently sinuated in apical part towards anterior wing margin; posterior wing margin almost evenly convex. Epandrium black, large, elongate, narrowing distad, 2.5 times longer than high. Hypandrium half as long as epandrium, swollen at base, with short erect basal process. Aedeagus thin, simple. Distoventral epandrial lobe small, broad, bearing a fan of about 6 long apical cilia. Postgonite longer than surstyli, curved ventrad, rounded at apex. Surstylus with 2 lobes; ventral lobe with 1 short thick apical setae and several setulae; dorsal lobe of surstylus short, with 3 short setae at apex. Cercus simple, long, 5 times longer than high, with long simple setae and short hooked cilia ventrally.

*Remark.* 1 ♂ and 1 ♀ from Madagascar determined by P. VANSCHUYTBROECK as *P. pedunculatus* (RMCA, examined) belong to species of the subfamily Diaphorinae. So, the species should be excluded from the fauna of Madagascar.

*Distribution.* Congo (Kinshasa); Malawi (!).

### 107. *Paracleius pontifex* (PARENT)

*Type material examined.* Holotype ♀, [DR Congo:] Eala, III.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 / *Pelastoneurus pontifex* n.sp. Type. O. PARENT / Type [red label].

*Material examined.* 2♂♂, Congo-belge, Eala, 9.V.1936, J. GHESQUIÈRE / R. Mus. Hist. Nat. Belg. I.G. 10.482 [ISNB].

*Diagnosis.* Frons metallic-violet; face black, blue-green under antennae, densely grey pollinose. Antenna with rounded postpedicel; stylus dorsal, with very long hairs; scape with thin long apicoventral pointed process. Postocular setae entirely black. Fore and hind coxae yellow, mid coxa with dark spot. Mid femur with 1 anterior and 1 posterior subapical setae. Hind femur with strong anterodorsal seta just behind middle of femur, twice longer than diameter of femur, without apical setae. 1<sup>st</sup>-3<sup>rd</sup> segments of mid tarsus white, 4<sup>th</sup>-5<sup>th</sup> black. M<sub>1+2</sub> and R<sub>4+5</sub> parallel in apical half of wing; *m-cu* slightly longer than distal part of CuA<sub>1</sub>. Size 2 mm. For other characters see description of female by PARENT (1937b: 4) and description of male *P. umbricola* by PARENT (1937: 5).

*Distribution.* Congo (Kinshasa).

### 108. *Paracleius reavelli* GRICHANOV, spec. nov.

(Figs. 115-116)

*Holotype*, ♂, South Africa: Natal, Mtunzini, Malaise Tr., 28°58' S, 31°46' E, *Barringtonia Raphia* swamp forest, III.1990, Coll.: P.E. REAVELL [NMP].

*Description.* Male. Head wider than high. Frons violet-black, brownish pollinose; face having black ground colour, densely grey pollinose. One strong vertical seta (broken) arising from small mound at the top of head, one short postvertical, a pair of strong ocellar setae (broken) on ocellar tubercle found. Upper postocular setae black, lower postoculars white. Eyes with short hairs lengthening slightly downward; face glabrous, with broad bulging clypeus, almost parallel-sided; face in middle 2 times wider than height of postpedicel, 1.6 times higher than wide. Antenna slightly shorter than height of head; scape and pedicel mostly orange, black dorsally; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel black, asymmetric, suboval, slightly longer than high, with rounded apex and microscopic hairs; stylus middorsal, black, with hairs as long as basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 18: 6: 20: 17: 36. Palpus and proboscis orange-brown, with short dark hairs; palpus with 1 short black seta.

Thorax blue-black; mesonotum brown pollinose; pleura whitish pollinose. 6 strong dorsocentral setae; 2 rows of acrostichals. Anterior slope of

mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae (broken) and 2 short lateral hairs.

Legs mostly yellow; fore coxa yellow; mid and hind coxae black; tarsi black from tip of basitarsus. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal setae. 4-5<sup>th</sup> segments of fore tarsus with ventral pile of microscopic light hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 62: 98: 96: 55: 22: 18: 12: 14. Mid femur simple, with 1 strong and 1 short anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 anteroventral, 1 posteroventral and 4 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 52: 128: 138: 68: 34: 25: 19: 15. Hind femur 5 times longer than high; with 1 anterodorsal seta at 5/6. Hind tibia with 3 anterodorsal, 3 posterodorsal, 3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments of hind tarsus each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 38: 127: 148: 47: 57: 38: 25: 17.

Wing almost evenly grey; veins black. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 39: 7. Distal part of M<sub>1+2</sub> weakly curved at first 1/3, then slightly convex anteriorly, joining costa just before wing apex. R<sub>4+5</sub> and M<sub>1+2</sub> gradually convergent. Crossvein *m-cu* straight, forming almost right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 33: 36; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres orange.

Abdomen bluish-black, whitish pollinose laterally; all tergites narrowly black along posterior margin. 8<sup>th</sup> segment black, with short black hairs. Epanthrium black, weakly pollinose, swollen basally, 1.5 times longer than high, having large ventral lobe extending from base of hypandrium to base of distoventral epandrial lobe. Hypandrium basoventral, narrow, simple. Aedeagus thin, bifurcated at apex. Distoventral epandrial narrow, widened at apex, with 3 apical setae. Postgonite shorter than surstyli, broad, curved ventrad, acute at apex. Surstylus brown, with 2 lobes, narrowing distally; ventral lobe with 1 short thick apical seta and 2 subapical setulae; dorsal lobe of surstylus curved dorsad, with 2 strong dorsal setae. Cercus mostly reddish-yellow, black along margins, slightly longer than wide, densely covered with short black simple and hooked cilia; cercus with rounded distal apex and right-angular basoventral apex bearing 6 long setae.

Female unknown.

Length (mm): body 4.2, antenna 1.1, wing 4.1/1.5, hypopygium 1.3.

*Distribution.* South Africa.

*Etymology.* The species is named for the collector, Dr. P.E. REAVELL.

*Diagnosis.* The new species is somewhat close to *P. vilkamaai* and other species of *P. ambiguus* group, differing in cercus being rounded, nearly as large as epandrium; face being parallel-sided, 2 times wider than height of postpedicel etc.

**109. *Paracleius sanjensis* GRICHANOV, spec. nov.**

(Fig. 117)

*Holotype*, ♂, Tanzania, Uzungwa Mts., Mwanihana Forest, Sanje River, 1400 m, 16.VIII.1982, M. STOLTZE & N. SCHARFF leg., Zool Museum, Copenhagen.

*Description.* Male. Frons and black, densely silvery-white pollinose. One long and strong vertical seta arising from small mound at the top of head, one shorter postvertical, a pair of strong ocellar setae present. Postocular setae black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, with slightly bulging clypeus, narrowest at middle, 4 times higher than wide under antennae; clypeus not reaching lower margin of eyes; face under antennae nearly as wide as height of postpedicel. Antenna black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae and 1 strong distodorsal seta, as long as pedicel; postpedicel subtriangular, as long as high, with right-angular apex and microscopic hairs; stylus positioned just ahead middle of dorsal side (partly broken). Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> segment of stylus, 9: 5: 16: 13. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Thorax bluish-black, mesonotum weakly grey pollinose, pleura whitish pollinose. 6 strong dorsocentral setae decreasing in size anteriorly; 2 rows of acrostichals. Anterior slope of mesonotum having numerous short hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly yellow; mid and hind coxae mostly brown on outer side; tarsi brown-black from tip of basitarsus. Femora without long hairs. Fore tibia with 3 anterodorsal, 2 posterodorsal, 2 apicodorsal setae; fore tarsus from tip of 2<sup>nd</sup> segment having light ventral pile of microscopic hairs. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 55: 95: 89: 55: 24: 18: 14: 14. Mid femur simple, with 2 anterior subapical setae. Mid tibia with 3-4 anterodorsal, 3-4 posterodorsal, 2 ventral at 1/3 and 2/3 and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several short apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 52: 120: 145: 70: 48: 32: 20: 18. Hind femur flattened laterally, 4.3 times longer than high; with 1 anterodorsal seta at 3/4; bare ventrally. Hind tibia with 4 anterodorsal, 4-5 posterodorsal, 3 apical and about 6 fine ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments of hind tarsus each with several short apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments

from first to fifth), 30: 130: 177: 48: 72: 50: 28: 15.

Wing evenly greyish, veins black. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 43: 7. M<sub>1+2</sub> having gentle curvature towards R<sub>4+5</sub> just before middle of distal part, joining costa just before wing apex. Crossvein *m-cu* straight, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 34: 22; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, whitish pollinose laterally. Epandrium black, grey pollinose, nearly 2 times longer than high in middle, concave ventrally and distally. Hypandrium nearly as long as epandrium, simple, pointed at apex. Aedeagus thin, having long thin lateral lobes arising from extreme base of hypandrium. Distoventral epandrial lobe large, elongate, bearing 2 simple dorsal setae and remarkably branched apical seta; 2 pedunculate epandrial setae at distoventral angle of epandrium. Postgonite shorter than long lobe of surstyli, narrow, curved ventrad, pointed at apex. Surstylus curved, with 2 lobes; ventral lobe expanded distally, glabrous; dorsal lobe of surstylus with 2 short apical and 1 strong and long basodorsal setae. Cercus looking like shell of nut, having longitudinal medial furrow laterally, black, with very short black marginal hairs, large, oval, 1.5 times longer than wide, nearly as long as epandrium.

Length (mm): body 3.9, wing 4.3/1.4, hypopygium 1.6.

*Distribution.* Tanzania.

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species keys out to *P. microproctus* and *P. bissindza*, differing in hind femur being entirely yellow; mid femur is simple, having 2 anterior subapical setae; hypopygium is large, nearly as long as abdomen, with rounded-oval cercus; fore tibia has 3 antero- and 3 posterodorsal setae; M<sub>1+2</sub> has gentle curvature towards R<sub>4+5</sub> just before middle of distal part.

**110. *Paracleius schoutedeni* (CURRAN)**

*Type material examined.* ♀, Holotypus [red label] / [DR Congo:] Musee du Congo, Lolo Mazinga, 22.IV.1926, A. COLLART-1. / R. Det. A 1285 / Type. *Pelastoneurus schoutedeni* ♀ CURRAN [red label] / *Pelastoneurus schoutedeni* CURRAN, det. C.H. CURRAN

*Diagnosis.* The species known by female is very close to *P. pectinifer*, differing in mid femur having 2-4 weak setae in addition to 1 strong subapical seta; lower calypter has simple setae; hind basitarsus is mostly yellow. Stylus weakly but distinctly haired. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 28: 3; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 23: 20.

*Distribution.* Congo (Kinshasa).

**111. *Paracleius thompsoni* GRICHANOV, spec. nov.**

(Figs. 118-119)

*Holotype*, ♂, Urundi: Terr. Bururi, Makamba, alt. 1450 m, 23.V.1948, F. FRANÇOIS / R.I.Sc.N.B. I.G. 24.452 [ISNB].

*Paratypes*, 2♂♂, 2♀♀, same labels; 1♀, Congo Belge: P.N.G. Miss H. DE SAEGER, II/dd/8, 6.II.1952, H. DE SAEGER, 3099 [RMCA].

*Description*. Male. Frons and face bluish-black, white pollinose. One long and strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Postocular setae black. Eyes with short hairs; face glabrous, with small clypeus, narrowest at suture; face under antennae as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 15: 8: 41; clypeus not reaching lower margin of eyes. Antenna 1/5 shorter than height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel subtriangular, acute-angular apicodorsally, slightly longer than high, with microscopic hairs; stylus middorsal, black, with hairs shorter than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 9: 4: 14: 8: 36. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Thorax bluish-black, mesonotum brownish pollinose, pleura white pollinose. 6 dorsocentral setae strongly decreasing in size anteriorly; 2 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short black hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs entirely black. Fore coxa with short black hairs anteriorly and 4 black setae at apex; mid coxa with 1 strong external seta in addition to anterior hairs and 2 apical setae. Fore femur with several antero- and posteroventral elongate setulae at apex. Fore tibia with 4 anterodorsal, 4 posterodorsal, 1 ventral setae; fore basitarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 40: 62: 65: 27: 10: 8: 7: 7. Mid femur flattened laterally, with 2 anterior subapical setae and several antero- and posteroventral elongate setulae at apex. Mid tibia with 3 anterodorsal, 2 dorsal, 2 posterodorsal, 1-2 ventral and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 42: 82: 86: 40: 20: 17: 11: 11. Hind femur flattened laterally, 4 times longer than high; with 3 anterodorsal setae in third quarter. Hind tibia with 4 anterodorsal, 4 posterodorsal, 3 apical setae, without strong ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apical setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 88: 95: 31: 34: 23: 16: 9.

Wing evenly greyish, somewhat darker along costa; veins brown. Costa

simple. R<sub>2+3</sub> almost straight. R<sub>4+5</sub> slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 35: 2. M<sub>1+2</sub> with right-angular curvature towards R<sub>4+5</sub> at 2/3 of distal part, forming very short foldlike stubvein (M<sub>2</sub>) and deep arc in distal 1/3, joining costa far before wing apex. Crossvein *m-cu* straight, forming nearly right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 22: 32; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex, with very small excision at apex of CuA<sub>1</sub>. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen dark-blue, black along sutures, densely white pollinose laterally. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, large, suboval, nearly as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined, nearly twice longer than high. Hypandrium as well as aedeagus thin and simple. Distoventral epandrial lobe small, elongate, with 1 strong basal and 2 short subapical setae; 1 epandrial seta just before base of epandrial lobe. Postgonite slightly shorter than surstyli, consisting of 2 broad symmetric sclerotised lobes, each lobe having small dorsoapical dens. Surstylus with 2 lobes subequal in length; ventral lobe narrow and straight, with 1 apical seta; dorsal lobe of surstylus broad, expanded distally, having 2 small projections bearing 1 or 2 setae. Cercus small, suboval, 1.5 times longer than high, 1/3 length of epandrium, covered with short simple hairs.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: face slightly wider than height of postpedicel; ratio of its maximal width to minimal width to height, 18: 14: 43.

Length (mm): body 2.9, antenna 0.8, wing 2.9/1.0, hypopygium 1.1.

*Distribution*. Burundi, Congo (Kinshasa).

*Etymology*. The species is named for the American dipterologist Dr. F.C. Thompson.

*Diagnosis*. The new species is remarkable in having entirely black simple legs and black postocular setae.

**112. *Paracleius umbricola* (PARENT)**

(Fig. 120)

*Type material examined*. Holotype ♀, [DR Congo:] Eala, 12.I.1935, J. GHESQUIÈRE / Sous ombrage tres dense, s/trone pourri d'un *Ficus* / R. Mus. Hist. Nat. Belg. I.G. 10.482 / *Hercostomus umbricola* n.sp. Type. O. PARENT / Type [red label].

*Additional material*. 3♂♂, 2♀♀, Congo Belge: P.N.G. Miss H. DE SAEGER, I/o/2, II/db/8, II/gc/8, 19.VII.1950, 6.II.1952, 30.IV.1952, 10.VII.1952, 19.VII.1952, 9.IX.1952, H. DE SAEGER [RMCA].

*Description*. Male. Frons mostly violet, black in middle, brownish pollinose in anterior half; face black, densely brownish pollinose. One long and strong vertical at the top of head, one short postvertical, a pair of long and

strong ocellar setae present. Postocular setae black. Eyes with short hairs; face with numerous fine long hairs, glabrous under antennae. Face slightly bulging at suture, narrowest at upper 1/3, slightly widening towards palpi; face in middle as wide as height of postpedicel; clypeus not reaching lower margin of eyes. Antenna as long as height of head; mostly reddish-orange; scape and pedicel simple; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel brown in apical 1/2, subtriangular, right-angular apicodorsally, as long as high, with rather long hairs; stylus positioned just before middle of dorsal side, black; 1<sup>st</sup> segment of stylus short and very thick; 2<sup>nd</sup> segment filiform, with hairs 2-3 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 8: 5: 11: 4: 51. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Mesonotum metallic violet, grey pollinose; pleura brown-black, white pollinose. 5 strong dorsocentral setae; 2 irregular rows of short acrostichals. Proepisternum with 1 strong black seta above fore coxa and several short light hairs. Scutellum with 2 strong setae and regular row of 10-12 short marginal hairs.

Legs mostly yellow or dirty-yellow; all coxae brown with yellow apex; fore femur brownish-yellow; fore tarsus brown from tip of basitarsus; mid basitarsus black at apex; 2<sup>nd</sup>-4<sup>th</sup> segments of mid tarsus mostly white, each black in distal 1/3; 5<sup>th</sup> segment black; hind tarsus brown from tip of 2<sup>nd</sup> segment. Femora without long hairs. Fore tibia with 1 anterodorsal, 2-3 apical setae; fore basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> segments with short apicoventral seta. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 40: 67: 68: 33: 12: 10: 9: 10. Mid femur with 1 anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 3 posterodorsal, 1 ventral, 1 anteroventral and 4 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with 1 very short ventral seta; 2<sup>nd</sup>-4<sup>th</sup> segments flattened. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 41: 90: 95: 42: 20: 17: 14: 12. Hind femur with 1 anterodorsal seta at 3/5. Hind tibia with 3 anterodorsal, 3 posterodorsal, 1 strong ventral, 2 apical setae. Hind basitarsus with 1 strong basoventral seta, half as long as basitarsus; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with 1 apicoventral setula. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 25: 88: 105: 25: 35: 19: 14: 13.

Wing mostly brownish, with hyaline transverse stripe just behind *m-cu*, as wide as *m-cu*; veins brown. Costa simple. R<sub>1</sub> reaching to first third of wing length. R<sub>2+3</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 34: 17. R<sub>4+5</sub> and M<sub>1+2</sub> parallel. M<sub>1+2</sub> joining costa at wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 25: 14. Posterior wing margin evenly convex. Anal vein weak; anal lobe pronounced; anal angle obtuse. Lower calypter brown, with black setae. Halteres light-brown.

Abdomen mostly black-brown, densely grey pollinose, with large silvery-white lateral spot on 2<sup>nd</sup> tergite and same but smaller spot on 4<sup>th</sup> tergite. 7<sup>th</sup> segment invisible. 8<sup>th</sup> segment yellow, with sparse fine dark cilia. Epandrium yellow, large, as long as 2<sup>nd</sup>-5<sup>th</sup> tergites combined, 2 times longer than high. Hypandrium half as long as epandrium, simple. Aedeagus thin, concealed. Distoventral epandrial lobe long and broad, bearing 2 long and 1 short setae. Postgonite as long as surstyli, narrow. Surstylus yellow, with 2 lobes; ventral lobe with a few short setae; dorsal lobe of surstylus excised at apex, with 2 strong apical setae. Cercus black, small, suboval, with simple black marginal setae, of which 2-3 distal setae strong, as long as cercus.

Length (mm): body 2.8, antenna 0.9, wing 3.0/1.0, hypopygium 1.0.

*Distribution.* Congo (Kinshasa).

*Diagnosis.* The species is very close to *P. pontifex* and related species, differing in mid leg coloration. Mid basitarsus is yellow, black at apex; 2<sup>nd</sup>-4<sup>th</sup> segments are mostly white, each is black in distal 1/3; 5<sup>th</sup> segment is black.

### 113. *Paracleius umngazi* GRICHANOV, spec. nov.

(Fig. 121)

*Holotype*, ♀, South Africa: Cape Prov., Umngazi Mouth, 3129Da, 20.X.1972, M.E. IRWIN, 3 to 10 m, coastal dunes [NMP].

*Paratype*, ♀, same label.

*Description.* Female. Frons as high as face, black, grey pollinose; face densely white pollinose. One long and strong black vertical at the top of head, one shorter white postvertical as a linear continuation of postocular setal row, a pair of strong ocellar setae present. Postocular setae entirely white. Eyes with short hairs; face glabrous, almost parallel-sided, 2 times higher than wide in middle, as wide as height of postpedicel; clypeus not reaching lower margin of eyes. Antenna positioned at middle of head, 1/3 shorter than height of head; mostly orange-yellow; scape simple, with several black dorsal hairs; pedicel short, internally convex anteriorly, with short distal setulae; postpedicel brown-black in distal half, subtriangular, as long as high at base, with acute apex and short dense hairs; stylus basodorsal, black; 1<sup>st</sup> segment of stylus very short and thick; 2<sup>nd</sup> segment glabrous. Length ratio of scape to pedicel to postpedicel to stylus, 7: 4: 7: 16. Palpus and proboscis small, yellow, with short hairs; palpus with 1 short black seta.

Thorax mostly black, densely grey pollinose. Metaepimeres light-brown, scutellum with light-brown posterior margin. 5 pairs of strong dorsocentral setae in regular rows; acrostichals biserial. Proepisternum with 1 strong white seta above fore coxa and several short white hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs including coxae yellow; 2-3 apical segments of tarsi brown. Femora without long hairs. Fore tibia with 2 anterodorsal, 2 posterodorsal, 2-3 short

apical setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 28: 45: 45: 25: 13: 8: 6: 7. Mid femur with 1 anterior subapical setae. Mid tibia with 2 anterodorsal, 2 posterodorsal, 1 short posteroventral at 2/3 and 5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several very short apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 28: 62: 69: 34: 21: 17: 9: 8. Hind femur nearly 6 times longer than high, with 1 anterodorsal seta at 4/5. Hind tibia with 2 pairs of strong anterodorsal and posterodorsal setae at 1/5 and 3/5, 3 apical setae, without strong ventral setae. Hind basitarsus with 2 ventral setulae; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with several apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 20: 69: 83: 25: 29: 21: 10: 9.

Wing hyaline, veins yellow-brown. Costa simple.  $R_{2+3}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 20: 4.  $R_{4+5}$  slightly curved posteriad at apex.  $M_{1+2}$  having weak but distinct curvature at middle of distal part, then gradually converging to  $R_{4+5}$ , subparallel to  $R_{4+5}$  at wing apex, joining costa just before wing apex. Crossvein *m-cu* positioned at 2/5 of wing, straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of  $CuA_1$ , 9: 49. Posterior wing margin evenly convex. Anal vein fold-like, anal lobe narrow, anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen mostly orange-yellow, weakly grey pollinose; 1<sup>st</sup> tergite brown in anterior half; 2<sup>nd</sup>-5<sup>th</sup> tergites each with 2 large black dorsolateral spots at base; the spots coalesced on 4<sup>th</sup> and 5<sup>th</sup> tergites; oviscapt hidden.

Male unknown.

Length (mm): body 2.2, antenna 0.4, wing 2.1/0.8.

*Distribution.* South Africa.

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species is related to *P. barraclooughi*, *P. michaeli* and *P. jasoni*, differing in thorax being mostly dark-grey rather than mostly yellow and having 5 rather than 6 dorsocentral setae.

#### 114. *Paracleius upembaensis* GRICHANOV, spec. nov.

(Fig. 122)

*Holotype*, ♂, Congo belge: P.N.U., Kiamokoto-Kiwakishi (1070 m), 4-16.X.1948, Mis. G.F. DE WITTE, 1886a / P. VANSCHUYTBROECK det. 1952, *Pelastoneurus emascuatus* PAR. [ISNB].

*Description.* Male. Frons and face black, densely silvery-white pollinose. One strong vertical seta (broken) on small mound at the top of head, one short postvertical, a pair of strong ocellar (broken) setae present. Postocular setae black. Eyes with short hairs; face glabrous, with small clypeus, narrowest in middle, not reaching to lower margin of eyes; ratio of maximal width to minimal width to height of face, 18: 9: 40. Antenna broken. Palpus and proboscis

small, black, with short hairs; palpus with 1 short black seta.

Thorax green-black, mesonotum grey pollinose, pleura white pollinose. 6 strong dorsocentral setae decreasing in size anteriorly, with 1<sup>st</sup> seta being very short; 2 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several microscopic hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs with all coxae and femora mostly black; fore coxa at apex, fore femur at apex and all trochanters orange; fore tibia and basitarsus yellow; 2<sup>nd</sup>-5<sup>th</sup> segments of fore tarsus orange brown; mid tibia and basitarsus yellow brown; mid basitarsus and next segment black; hind tibia and basitarsus light brown; hind tarsus black from tip of basitarsus. Fore femur with complete anteroventral row of cilia, approximately as long as diameter of femur, and ventral row of fine setae in basal 2/3 decreasing in length basad with 3-4 distal setae in the row 2 times longer than diameter of femur; 1-2 subapical posteroventral cilia also present. Fore tibia with 3 strong anterodorsal, 3 weaker posterodorsal setae and ventral row of 4-5 fine setae in middle third, 2 times longer than diameter of tibia; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 56: 81: 68: 35: 13: 10: 9: 10. Mid femur simple, with 1 anterior subapical setae. Mid tibia with rows of 4 anterodorsal, 4-5 posterodorsal, 4 ventral and ring of 4-5 apical setae. Mid tarsus mostly broken. Length ratio of mid coxa to femur to tibia to tarsus (segments first and second), 34: 100: 107: 57: 43. Hind femur flattened laterally, 3 times longer than high; with 1 anterodorsal seta at 2/3, 3 ventral cilia in distal third, approximately as long as diameter of femur, and several elongate anteroventral hairs at apex. Hind tibia with 5 anterodorsal, 5 posterodorsal, 3 apical, several weak ventral setae. Hind basitarsus with 1 short basoventral seta; 5<sup>th</sup> segment broken. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fourth), 32: 100: 136: 47: 55: 40: 25.

Wing greyish, brownish in anterior half; veins brown. Costa simple.  $R_{2+3}$  and  $R_{4+5}$  almost straight. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 34: 2.  $M_{1+2}$  having gentle curvature towards  $R_{4+5}$  at middle of distal part, joining costa far before wing apex. Crossvein *m-cu* slightly convex, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of  $CuA_1$ , 30: 25;  $CuA_1$  not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, densely white pollinose laterally; 6-7<sup>th</sup> segments brown-black. 8<sup>th</sup> segment black, with short sparse dark hairs. Epandrium black, grey pollinose, trapezoidal, 2 times longer than high. Hypandrium thick, trilobate. Aedeagus thin, simple, concealed. Distoventral epandrial lobe fused with epandrium, large, subtriangular, having 3 short setae as figured; 1 epandrial seta just before base of epandrial lobe. Postgonite as long as surstyli, narrow,



slightly curved ventrad, rounded at apex. Surstylus brown, slightly curved, with 2 lobes; ventral lobe irregularly narrowing distad, having 2 simple setae; dorsal lobe of surstylus bonelike, with 2 apical setae. Cercus black, large, bilobate; ventral lobe broad, with long marginal setae; dorsal lobe of cercus as long as ventral one, thin, incised at apex, having apical brush of hooked hairs.

Female unknown.

Length (mm): body 3.2, wing 3.4/1.2, hypopygium 1.3.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the country of origin (Upemba National Park).

*Diagnosis.* *P. upembaensis* is a sister species to *P. ogojaensis*, differing in fore tibia having 3 strong dorsal setae and ventral group of 15 very long undulate semierect black hairs in 3<sup>rd</sup> quarter, 2-3 times longer than diameter of tibia.

#### 115. *Paracleius vilkamaai* GRICHANOV, spec. nov.

(Figs. 123-124)

*Holotype*, ♂, Congo Belge: P.N.A., Rwindi, 1000 m, 22 au 24.XI.1934, G.F. DE WITTE: 793 / P. VANSCHUYTBROECK det. 1951, *Hercostomus argyropus* LOEW [ISNB].

*Paratypes*, 1♂, same labels (no. 794); 4♂♂, Congo Belge: P.N.A., Kanda, 950 m, 30.XI.1934, G.F. DE WITTE: 857 / P. VANSCHUYTBROECK det. 1951, *Hercostomus argyropus* LOEW [ISNB]; 2♂♂, Lac Edouard: Ishango (Semliki), 14.XII.1935, Dr. H. DAMAS, Parc. Nat. Albert, 93 / P. VANSCHUYTBROECK det. 1951, *Hercostomus pilifer* LOEW [ISNB].

*Description.* Male. Head as wide as high. Frons violet-black, weakly grey pollinose; face black, densely white pollinose. One strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of strong ocellar setae on ocellar tubercle found. Upper postocular setae black, lower postoculars white, the lowest seta black. Eyes with short hairs; face glabrous, with slightly bulging clypeus, slightly narrowing towards clypeus; face in middle slightly wider than height of postpedicel, 2.5 times higher than wide. Antenna 1/5 shorter than height of head; scape and pedicel mostly orange, black dorsally; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, asymmetric, rounded-triangular, as long as high, with rounded apex and microscopic hairs; stylus positioned at first 1/3 of dorsal side, black, with hairs 3-4 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 11: 5: 14: 9: 40. Palpus orange, grey pollinose, with short hairs and 1 short black seta; proboscis brown, with short dark hairs and pair of long cilia.

Thorax blue-black, whitish pollinose; mesonotum having mat-black longitudinal medial stripe and mat-black lateral spot above notopleura. 6 strong

dorsocentral setae; 2 rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several short hairs. Scutellum with 2 strong setae and 2 very short lateral hairs.

Legs mostly yellow; fore coxa yellow; mid and hind coxae black, having yellow apex; fore and mid tarsi brown-black from tip of basitarsus; hind tibia at apex and hind basitarsus at base brownish; hind tarsus black otherwise. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal short setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 55: 86: 88: 39: 20: 15: 10: 11. Mid femur simple, with 1 strong anterior and 1 posteroventral subapical setae. Mid tibia with 3 anterodorsal, 2 posterodorsal, 2 ventral and 4 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with 1-2 apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 52: 115: 140: 53: 42: 36: 26: 22. Hind femur 6.6 times longer than high; with 1 anterodorsal seta at 3/4. Hind tibia with 4 anterodorsal, 3 posterodorsal, 3 ventral, 3 apical setae. Hind basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 35: 119: 145: 32: 54: 35: 28: 19.

Wing mostly greyish, brownish in anterior half; veins black. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> slightly convex anteriorly. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 34: 5. Distal part of M<sub>1+2</sub> almost straight, weakly concave at middle, joining costa just before wing apex. R<sub>4+5</sub> and M<sub>1+2</sub> gradually convergent. Crossvein *m-cu* straight, forming almost right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 31: 21; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres orange.

Abdomen bluish-black. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, weakly pollinose, swollen basally, pointed distally, 1.5 times longer than high. Hypandrium thick, half as long as epandrium, having dorsal tooth before apex. Aedeagus thin, simple. Distoventral epandrial lobe short and narrow, bearing 3 long setae; 1 epandrial seta at base of hypandrium (the seta arising from epandrial lobe on right side of epandrium). Postgonite short and narrow, concealed. Surstylus brown, straight, with 2 lobes, which swollen at base, narrow in distal part, having a few setulae; dorsal lobe of surstylus with 1 strong basodorsal seta. Cercus black, oval, 2 times longer than wide, half as long as epandrium, densely covered with long white cilia on inner side and along margin, with short hairs on outer side; marginal cilia straight in outer row and hooked in inner row.

Female unknown.

Length (mm): body 4.0, antenna 0.9, wing 3.9/1.3, hypopygium 1.4.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named after the Finnish dipterologist Dr. Pekka VILKAMAA.

*Diagnosis.* The new species is close to *P. julius*, differing in shape of male cercus having yellow rather than black ventral cilia. *P. vilkamaai* belongs to *P. ambiguus* group of species, differing from the latter in having longer cercus and in fine morphology of surstyli, hypandrium and aedeagus.

**116. *Paracleius whittingtoni* GRICHANOV, spec. nov.**

(Figs. 125-126)

*Holotype*, ♂, S. Africa: E. Cape, #18, 5 km N of Barkly East, 30°55' S, 27°36' E, 1780 m, 2.III.1992, Beeskraal se loop, riparian grass, J. LONDT & A. WHITTINGTON [NMP].

*Description.* Male. Frons black-violet, weakly pollinose; face having bluish-black ground colour, densely white pollinose. One strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of long and strong ocellar setae present. Upper postocular setae black, lower postoculars white, the lowest seta black, very strong. Eyes with short hairs; face glabrous, with bulging clypeus, slightly narrowing in middle; face in middle 1.7 times wider than height of postpedicel, 2 times wider than high. Antenna slightly shorter than height of head; scape and pedicel mostly orange, blackish dorsally; scape with short inner acute projection; pedicel short and high, internally convex anteriorly, with short distal setulae; postpedicel mostly black, orange at base, asymmetric, subtriangular, approximately as long as high, with microscopic hairs; stylus middorsal, black, with hairs 1.5-2 times longer than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 15: 8: 21: 16: 34. Palpus and proboscis yellow-brown, with short dark hairs; proboscis with pair of long black cilia; palpus with 1 short black seta.

Thorax mostly blue-black, whitish pollinose; mesonotum having 2 small mat-black spots above notopleura and above pteropleura and green longitudinal medial stripe, as wide as distance between acrostichal rows; the stripe having black limb laterally, ending with brown prescutellar spot. 6 strong dorsocentral setae slightly decreasing in size anteriorly; 2 rows of acrostichals. Anterior slope of mesonotum covered with short hairs. Proepisternum with 1 strong black seta above fore coxa and several rather long hairs. Scutellum with 2 strong setae and 2 short lateral hairs.

Legs mostly dirty-yellow; fore coxa yellow; mid and hind coxae black; knees brownish; hind tibia black at apex; fore and mid tarsi black from tip of basitarsus; hind tarsus entirely black. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 60: 95: 97: 51: 26: 18: 13: 10. Mid femur simple, with 1 anterior subapical seta. Mid tibia with 3-4 anterodorsal, 2 posterodorsal, 2 anteroventral, 1 posteroventral and 3-4 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 55: 125: 160:

60: 50: 39: 29: 19. Hind femur nearly 7 times longer than high; with 1 anterodorsal seta at 4/5. Hind tibia with 4 anterodorsal, 3 posterodorsal, 3 ventral and 3 apical setae. Hind basitarsus with 1 short basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 36: 135: 170: 44: 60: 46: 30: 20.

Wing greyish, brownish along costa; veins brown-black. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight, slightly convex anteriorly. R<sub>4+5</sub> slightly curved posteriorly at apex. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 45: 5. Distal part of M<sub>1+2</sub> slightly convex posteriorly, joining costa far before wing apex. R<sub>4+5</sub> and M<sub>1+2</sub> gradually convergent. Crossvein *m-cu* straight, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 35: 31. Posterior wing margin almost evenly convex. Anal vein distinct; anal lobe pronounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, whitish pollinose laterally. 7<sup>th</sup> segment half as long as epandrium. 8<sup>th</sup> segment black, with short black hairs. Epandrium black, grey pollinose, suboval, with irregular ventral margin. Hypandrium 2/3 length of epandrium, having large right lateral dens before apex. Aedeagus thin, concealed. Distoventral epandrial lobe fused with epandrium, relatively broad, bearing 5 strong apical setae. Postgonite as long as ventral lobe of surstyli, narrow, curved ventrad, rounded at apex. Surstylus black, curved, with 2 lobes; ventral lobe with 1 apical and 1 basal setae; dorsal lobe of surstylus large, expanded distally, with 2 very small and 1 very big branched middorsal setae. Cercus black, subtriangular, large, densely covered with black cilia, with several long setae at apex of ventral lobe; ventral side of cercal triangle distinctly longer than dorsal one.

Female unknown.

Length (mm): body 4.1, antenna 1.0, wing 4.5/1.5, hypopygium 1.3.

*Distribution.* South Africa.

*Etymology.* The species is named for one of the collectors, Dr. A. WHITTINGTON.

*Diagnosis.* The new species is very close to *P. neocongoensis* and *P. naglisi*, differing in hypandrium having large right lateral subapical tooth; ventral side of cercal triangle is distinctly longer than dorsal.

**117. *Paracleius zamotailovi* GRICHANOV, spec. nov.**

(Figs. 127-128)

*Holotype*, ♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Aka, 15.V.1952, H. DE SAEGER, 3463 [RMCA].

*Paratypes*, 2♂♂, Congo Belge: P.N.G. Miss H. DE SAEGER, Dedegwa, 17.V.1952 & 21.V.1952, H. DE SAEGER, 3481 & 3499 [RMCA]; ♂, Congo

Belge: P.N.U., Lusinga (1760 m), 8.III.1947, Miss. G.F. DE WITTE / P. VANSCHUYTBROECK det. 19??, *Pelastoneurus pedunculatus* PARENT [ISNB].

*Description.* Male. Frons bluish-black, grey pollinose; face brown-black, densely grey-whitish pollinose. One long and strong vertical seta (broken) arising from small mound at the top of head, one short postvertical posteriorly, a pair of strong ocellar setae present. Upper postocular setae black, lateral and lower postoculars white, the lowest seta black, strong. Eyes with short hairs; face glabrous, narrowing towards clypeus; ratio of its maximal width to minimal width to height, 12: 5: 24; face under antennae as wide as height of postpedicel; clypeus not reaching lower margin of eyes. Antenna mostly reddish-yellow; pedicel short and high, internally convex anteriad, with short distal setulae; postpedicel mostly black, orange at base, securiform or subtriangular, with acute apex and short hairs, 1.4-1.5 times as long as high at base; stylus middorsal, black. Length ratio of scape to pedicel to postpedicel to stylus, 5: 3: 17: 15: 28. Palpus and proboscis small, orange-brown, with short hairs; palpus with 1 short black seta.

Mesonotum metallic blue-black, weakly pollinose; pleura brown-black, grey pollinose. 5 strong dorsocentral setae; 2 rows of rather long acrostichals present. Proepisternum with 1 strong black seta above fore coxa and several short dark hairs. Scutellum with 2 strong setae and 2 lateral hairs.

Legs including coxae mostly yellow; mid coxa brownish externally or mostly black; last 2-3 segments of tarsi brownish. Femora without long hairs. Fore tibia with 1 anterodorsal, 2 posterodorsal, 2 apicodorsal setae and anterodorsal row of somewhat elongated setulae in distal half; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 30: 50: 50: 24: 7: 4: 4: 5. Mid femur with 1 anterior subapical seta, 1 anteroventral and 1 posteroventral subapical elongate cilia. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 strong anteroventral, 1 short posteroventral and 4 apical setae. 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 22: 63: 68: 32: 21: 13: 10: 8. Hind femur 4.3-4.7 times longer than high, with 1 anterodorsal seta at 3/4 and 1 elongate anteroventral subapical cilia. Hind tibia with 3 anterodorsal, 4 posterodorsal, 1 short ventral at 2/3, 3 apical setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-4<sup>th</sup> tarsomeres each with apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 17: 65: 76: 20: 28: 19: 11: 8.

Wing almost hyaline, greyish along costa; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> inconspicuously convex anteriad. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 20: 5 or 28: 5. M<sub>1+2</sub> having weak sinuation in middle third of its distal part, being parallel to R<sub>4+5</sub> at wing apex, joining costa just before wing apex. Crossvein *m-cu* almost straight, forming right angles with longitudinal veins. Ratio of *m-cu* to distal part of CuA<sub>1</sub>, 15: 21. Posterior wing margin evenly convex. Anal vein distinct; anal lobe pro-

nounced; anal angle obtuse. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, whitish pollinose laterally. 7<sup>th</sup> segment 2/5 length of epandrium. 8<sup>th</sup> segment black, with short fine dark cilia. Epandrium black-brown, swollen at base, cylindric in distal half, concave ventrally, 2 times longer than high. Hypandrium long, very broad in distal half (ventral view). Aedeagus thin, concealed, with large dorsal bulb far before apex. Distoventral epandrial lobe long and thin, bearing 2 strong setae. Postgonite slightly shorter than ventral lobe of surstylus, narrow, curved ventrad, rounded at apex. Surstylus light-brown, straight, with 2 lobes; ventral lobe broad, with 1 short apical, 1 short middorsal and 2 strong basal setae; dorsal lobe of surstylus narrow, with 1 strong basodorsal setae. Cercus mostly black, orange in basal third, with long simple black marginal setae in distal 1/2, twice longer than high, rounded and slightly excised along margin distally.

Female unknown.

Length (mm): body 2.1, antenna 0.8, wing 2.1-2.5/0.7-0.9, hypopygium 0.7.

*Distribution.* Congo (Kinshasa).

*Etymology.* The species is named for the Russian entomologist, Dr. A. ZAMOTAILOV.

*Diagnosis.* The new species is close to *P. micrurus*, differing in smaller size; cercus being mostly black; epandrium being elongate, 2 times longer than high at base; aedeagus having large dorsal bulb.

### 118. *Paracleius zogualensis* GRICHANOV, spec. nov.

(Fig. 129)

*Holotype*, ♂ [in alcohol], C.I., N' Man, Zogualé, Cascade Mont la Den, 7°25' N, 7°34' W, 16.II.1998, leg. KASSEBEER & HILGER [ZIUK].

*Description.* Male. Frons black; face black-brown. One strong vertical seta arising from small mound at the top of head, one short postvertical, a pair of strong ocellar setae present. Postocular setae black; the lowest seta is the strongest. Eyes with short hairs; face glabrous, with small clypeus, narrowest at suture; clypeus not reaching to lower margin of eyes; face under antennae as wide as height of postpedicel; ratio of its maximal width to minimal width to height, 15: 8: 50. Antenna as long as height of head, black; scape with short inner acute projection; pedicel short and high, internally convex anteriad, with short distal setulae and 1 strong distodorsal seta; postpedicel subtriangular, with acute apex, 2.2 times as long as high, with microscopic hairs; stylus positioned at distal 4/5 of dorsal side, black, with hairs shorter than basal diameter of stylus. Length ratio of scape to pedicel to postpedicel to stylus (1<sup>st</sup> and 2<sup>nd</sup> segments), 19: 5: 26: 15: 49. Palpus and proboscis small, black, with short hairs; palpus with 1 short black seta.

Thorax dark-green. 6 strong dorsocentral setae (mostly broken), with 1<sup>st</sup> seta being very short; 2 rows of acrostichals. Anterior slope of mesonotum having numerous rows of short hairs. Proepisternum with 1 strong black seta above fore coxa and several short black hairs. Scutellum with 2 strong setae and 2 lateral hairs (broken).

Legs mostly yellow; mid coxae brown on outer side; tarsi brown-black from tip of basitarsus. Fore femur without long hairs. Fore tibia with 3 anterodorsal, 2 posterodorsal setae; fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 60: 90: 83: 52: 23: 16: 12: 10. Mid femur simple, with 2 anterior subapical setae. Mid tibia with 4 anterodorsal, 4 posterodorsal, row of 3 ventral and 4-5 apical setae. 1<sup>st</sup>-4<sup>th</sup> segments of mid tarsus each with several short apical setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 52: 120: 130: 52: 50: 40: 25: 14. Hind femur flattened laterally, 3.7 times longer than high; with 1 anterodorsal seta at 3/4; bare ventrally. Hind tibia with 5 anterodorsal, 2-3 posterodorsal, 3 apical and about 8 fine ventral setae. Hind basitarsus with 1 short basoventral seta; 1<sup>st</sup>-5<sup>th</sup> tarsomeres each with several short apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 30: 120: 162: 40: 70: 47: 30: 15: 141.

Wing greyish, brownish in anterior half; veins brown. Costa simple. R<sub>2+3</sub> and R<sub>4+5</sub> almost straight. Ratio of part of costa between R<sub>2+3</sub> and R<sub>4+5</sub> to this between R<sub>4+5</sub> and M<sub>1+2</sub>, 30: 4. M<sub>1+2</sub> having gentle but rather strong curvation towards R<sub>4+5</sub> at middle of distal part, joining costa far before wing apex. Cross-vein *m-cu* slightly convex, forming right angles with longitudinal veins; ratio of *m-cu* to distal part of CuA<sub>1</sub>, 28: 22; CuA<sub>1</sub> not reaching wing margin. Posterior wing margin almost evenly convex, with shallow emargination at apex of CuA<sub>1</sub>. Anal vein distinct; anal lobe pronounced. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen greenish-black, with partly brown 1<sup>st</sup> tergite; 6-7<sup>th</sup> segments brown-black. 7<sup>th</sup> segment  $\frac{3}{4}$  length of 4<sup>th</sup> and 5<sup>th</sup> tergites combined, 1.2 times longer than epandrium; 8<sup>th</sup> segment black, with yellow spot at middle and sparse dark hairs. Epandrium black-brown, subrectangular, 2 times longer than high. Hypandrium basodorsal, broad, with 2 broad, bifurcated at apex lobes; dorsal lobe of hypandrium nearly reaching apex of epandrium. Aedeagus short and broad, simple, concealed. Distoventral epandrial lobe fused with epandrium, large and broad, having 2 long, branched at apex, setae. Postgonite as long as surstyli, narrow. Surstylus brown, long and thin, glabrous; dorsal lobe thin and pointed in apical half. Cercus black, with short black simple marginal setae, 2/3 length of epandrium, nearly 2 times longer than high, with narrow distal apex.

Female unknown.

Length (mm): body 4.6, antenna 1.4, wing 4.3, hypopygium 1.2.

*Distribution.* Ivory Coast.

*Etymology.* The species is named for the type locality.

*Diagnosis.* The new species keys out to *P. sanjensis*, differing in postpedicel being longer, 2.2 times as long as high; hypopygium smaller, as long as 4<sup>th</sup>-5<sup>th</sup> tergites combined; cercus smaller than epandrium, with distinct distal apex; and other characters.

### 119. *Paracleius zonatus* PARENT

*Type material examined.* 2♀♀, Foercados, S. Nigeria, J.J. SIMPSON, 26.6.1910 / *Paraclius zonatus* n.sp. Cotype. / Paratype [red label] [MNHP].

*Diagnosis.* Antenna yellow red; postpedicel mostly brown, as high as face width; lateral postocular setae white. Femora yellow; at least mid coxa mostly brown or black; mid femur with remarkable row of 5-6 black ventral setae at base; mid tibia without ventral setae; wing brownish anteriorly at apex; abdomen entirely dark.

*Remark.* 1♂ and 2♀♀ from Madagascar determined by P. VANSCHUYTBROECK as *P. zonatus* (RMCA, examined) belong to another species. So, the species should be excluded from the fauna of Madagascar.

*Distribution.* Ghana, Nigeria.

### Genus *Polymedon* OSTEN-SACKEN

Species of the genus strongly differ from known Afrotropical and Palearctic species of *Tachytrechus*, belonging to South-American group of species previously included in the genera *Polymedon*, *Macellocerus* and *Psilischium* (BECKER, 1921). New species have projecting clypeus typical of *Polymedon* species, and *P. mulanjensis* and *P. ethiopiensis* have flattened stylus characterising the last two genera. Hind coxa is having no strong external bristle; frons is low, antennae are positioned at the top of head; scape is microscopically haired. ROBINSON (1970) synonymised all those genera with *Tachytrechus* and noted that the name *Gongrophora* has a priority against the other synonyms. I believe that the striking features of both sexes of that group support the generic independence of *Polymedon*. More than 20 mostly Neotropical species are known in the world. *P. inopinatus* Parent, 1934 was found in China (Sichuan, Yunnan) and India (Yang & Grootaert, 1999), being very close to Afrotropical species.

### 120. *Polymedon ethiopiensis* GRICHANOV, spec. nov.

(Figs. 130-132)

*Holotype*, ♂, Ethiopia: Kefa, Jimma, 55 km S, Forest & River, 12.II.2000, A. FREIDBERG & I YAROM [TAU].

*Paratypes*, 1♂, 1♀, same label.

*Description.* Male. General coloration of body bluish-black. Frons re-

duced to 2 small patches on top of head laterally of ocellar tubercle. One microscopic vertical, one very short fine postvertical, a pair of strong ocellar setae present. Upper postocular setae black; lateral postoculars reddish-yellow; ventral postcranium with several yellow setae. Eyes with microscopic hairs, face bare. Face greenish-black, brown at apex, almost parallel-sided, narrowest in middle; ratio of its minimal width to height, 36: 120; clypeus apically beak-like, projecting by 1/5 of eye height below margin of eyes. Antenna 1.2 times longer than height of head, mostly orange-red; scape swollen, vase-like, with several microscopic hairs dorsally; pedicel very small, with microscopic setulae distally; postpedicel blackish apically, conoid, 2 times as long as high, slightly flattened laterally; stylus mostly black, bare, strictly apical, with greatly reduced 1<sup>st</sup> segment and broad flag in distal 1/6; the flag 1.5 times longer than wide, rounded apically, white in basal 1/3. Length ratio of scape to pedicel to postpedicel to stylus to flattened part of stylus, 16: 5: 18: 130: 20. Palpus and proboscis black, with short black hairs; palpus almost entirely concealed.

Mesonotum black, brownish pollinose; pleura bluish-black, white pollinose. Two strong posterior and 8 short hairlike anterior dorsocentral setae, 2 rows of microscopic acrostichals. Proepisternum with 1 strong black seta and numerous white hairs above coxa. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow-orange; mid and hind coxae black-brown; hind femur with brown apex and blackish-brown spot at middle posterodorsally; knees brownish; fore tibia and basitarsus dirty-yellow, mid and hind tibiae brown dorsally; fore and mid tarsi black. All femora with long dorsal hairs in basal half, at most as long as diameter of femur. All tarsi simple, with strong claws. Fore coxa with light hairs and several fine black apical setae. Fore tibia with 2 anterodorsal, 2 posterodorsal very short setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 95: 120: 120: 45: 30: 15: 13: 20. Mid femur slightly concave at middle posteriorly, with elongate ventral hairs at base and anterior hairs in middle 1/3. Mid tibia with 3 anterodorsal, 2 posterodorsal, 1 short ventral and 5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 60: 140: 165: 70: 48: 27: 14: 18. Hind femur with 2-3 anterodorsal setae in third quarter. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2 ventral, 3 apical setae. Hind basitarsus with 1 basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 45: 165: 190: 55: 71: 35: 21: 20.

Wing almost entirely brownish. Costa simple.  $R_1$  0.4 times as long as wing.  $R_{2+3}$  and  $R_{4+5}$  almost straight, slightly divergent. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 37: 23.  $M_{1+2}$  with weak flexion at basal 1/3 of its distal part, joining costal vein just before wing tip. Distal part of  $M_{1+2}$  1.7 times as long as proximal part. Crossvein *m-cu* almost straight, equal in length to apical part of  $CuA_1$ . Anal vein foldlike, not reaching to wing margin; anal lobe large; anal angle right. Lower calypter yellow, with black se-

tae. Halteres yellow.

Abdomen bluish-black, with black hairs and short marginal setae. 6-7<sup>th</sup> segments black, bare; 8<sup>th</sup> segment bluish-black, with short black hairs along margins. Epandrium black, large. Hypandrium comparatively narrow, pointed at apex, fused to epandrium. Aedeagus narrow, simple. Distoventral epandrial lobe broad, prominent, fused to epandrium, with two short apical setae. Surstylus brown, two pairs; ventral lobe of surstylus narrow, slightly projected just behind distoventral epandrial lobe; dorsal lobe of surstylus large and broad, fused to cercal base, having 4 thick apical setae. Postgonite short, narrow. Cercus black, large, bisegmented, crenulate along margins, with ventral lobe subquadrate, 2 times larger than dorsal lobe, having long hooked setae; dorsal lobe of cercus suboval, 2 times longer than wide, with short hooked cilia distally.

Female similar to male except as follows. Face entirely black, ratio of its minimal width to height, 43: 125. Antenna simple, mostly dark-brown-black, slightly shorter than head height; postpedicel orange at base; length ratio of scape to pedicel to postpedicel to stylus, 17: 5: 16: 102. Fore coxa with large blackish spot in basal 2/3, femora blackish along dorsal and ventral sides, tibiae and tarsi black. Abdomen having 5 visible segments.

Length (mm): body 5.1-5.4, antenna 1.7 (female) - 2.0 (male), wing 5.4/1.8, hypopygium 2.0.

*Etymology.* The species is named for the country of origin.

*Diagnosis.* The new species is closely related to *P. mulanjensis*, differing in wing being almost entirely brownish and apical flag on male stylus being white in basal 1/3. *P. mulanjensis* has wing practically hyaline, inconspicuously darkened at *m-cu* and flexion of  $M_{1+2}$ ; male antennal stylus is entirely black. Both species differ from *P. octavianus* in wing vein *m-cu* being as long as distal part of  $CuA_1$  and male cercus having short ventral lobe.

*Distribution.* Ethiopia.

### 121. *Polymedon mulanjensis* GRICHANOV, spec. nov.

(Figs. 133-135)

*Holotype*, ♂, Malawi: Mulanje Mnt., Likabula river valley, 28-30.XI.1980, 1535Dc, 1000 m, STUCKENBRG & LONDT, Riverine *Brachystegia* woodland [NMP].

*Paratypes*, 3♂♂, 2♀♀ with the same label.

*Description.* Male. General coloration of body bluish-black. Frons reduced to 2 small patches on top of head laterally of ocellar tubercle. One very short vertical, one fine postvertical, a pair of strong ocellar setae present. Upper postocular setae black; lateral postoculars dirty-yellow; ventral postcranium with several yellow setae. Eyes with microscopic hairs, face bare. Face greenish-black below antennae, black in middle third, with yellow clypeus, mostly white pollinose, free of pollen in upper third laterally. Face almost parallel-

sided, narrowest in middle; ratio of its minimal width to height, 32: 122; clypeus beak-like, projecting by 1/4 of eye height below margin of eyes. Antenna 1.5 times longer than height of head, mostly yellow-orange; scape swollen, vase-like, with several microscopic hairs dorsally; pedicel very small, with microscopic setulae distally; postpedicel brownish apically, conoid, 2 times as long as high, slightly flattened laterally; stylus black, bare, strictly apical, with greatly reduced 1<sup>st</sup> segment and broad flag in distal 1/6; the flag 2 times longer than wide, truncate apically. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus to flattened part of stylus, 17: 5: 19: 2: 180: 20. Palpus and proboscis black, with short black hairs; palpus almost entirely concealed.

Mesonotum black, brownish pollinose; pleura bluish-black, white pollinose. Two strong posterior and 8 short hairlike anterior dorsocentral setae, 2 rows of microscopic acrostichals. Proepisternum with 1 strong black seta and numerous white hairs above coxa. Scutellum with 2 strong setae and 2 lateral hairs.

Legs mostly yellow-orange; mid and hind coxae black, white pollinose; knees brownish; fore tibia dirty-yellow, mid and hind tibiae light-brown; all tarsi black, simple, with strong claws. Fore coxa with brownish hairs and several fine black apical setae. Fore femur bare. Fore tibia with 2 anterodorsal, 2 posterodorsal very short setae. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 100: 120: 120: 60: 37: 20: 12: 18. Mid femur simple, with dorsal row of 6-7 hairs in basal 1/3, at most as long as diameter of femur, ventral row of shorter hairs in basal half and anterior row of 7-8 short hairs in third quarter. Mid tibia with 2-3 anterodorsal, 2 posterodorsal, 1-2 ventral and 5 apical setae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 70: 150: 170: 83: 54: 29: 15: 23. Hind femur with 2-3 dorsal setae in apical third in addition to 1 anterodorsal seta in middle; all setae fine, shorter than diameter of femur. Hind tibia with 3 anterodorsal, 3 posterodorsal, 2 ventral, 3 apical setae. Hind basitarsus with 1 basoventral seta. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 50: 175: 197: 55: 85: 38: 23: 25.

Wing practically hyaline, inconspicuously darkened at *m-cu* and flexion of  $M_{1+2}$ . Costa simple.  $R_1$  0.4 times as long as wing.  $R_{2+3}$  and  $R_{4+5}$  almost straight, slightly divergent. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 22: 12.  $M_{1+2}$  with weak flexion at basal 2/5 of its distal part, joining costal vein just before wing tip. Distal part of  $M_{1+2}$  1.5 times as long as proximal part. Crossvein *m-cu* almost straight, equal in length to apical part of  $CuA_1$ . Anal vein foldlike, not reaching to wing margin; anal lobe large; anal angle right. Lower calypter yellow, with black setae. Halteres yellow.

Abdomen bluish-black, whitish pollinose, with black hairs and short marginal setae. 6-7<sup>th</sup> segments black, bare; 8<sup>th</sup> segment bluish-black, with short black hairs along margins. Epandrium black, large. Hypandrium short, bilobate

and narrow at apex. Aedeagus narrow, simple. Epandrial lobe prominent, fused to epandrium, with 4 short marginal setae. Surstylus brown, two pairs; ventral lobe of surstylus short and broad, slightly projected just behind distoventral epandrial lobe; dorsal lobe of surstylus narrow, strongly curved, broadened distally, fused to cercal base, having 4 thick apical setae of equal length. Distal epandrial process short, narrow. Cercus black, bisegmented, with ventral lobe suboval, 2 times larger than dorsal lobe, having long hooked marginal setae; dorsal lobe of cercus suboval, 3 times longer than wide, with long cilia distally.

Female. Female similar to male except as follows. Epistome bluish-black, entirely pollinose; clypeal suture marked by small lateral tubercles; clypeus almost entirely black, orange at extreme apex; ratio of minimal width to height of face, 37: 115. Antenna simple, as long as head height; postpedicel mostly black-brown, orange at base; length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus, 15: 5: 21: 9: 97. Fore coxa with large blackish spot in middle; femora mostly orange; fore femur blackish along dorsal side and ventrally in basal 1/3; mid femur blackish dorsally and ventrally in basal 2/3; hind femur blackish dorsally except base. Abdomen having 5 visible segments.

Length (mm): body 5.0, antenna 1.5 (female) - 2.7 (male), wing 5.5/1.8, hypopygium 2.1.

*Etymology.* The species is named after the type locality.

*Diagnosis.* See diagnosis of *P. ethiopiensis*.

*Distribution.* Malawi.

## 122. *Polymedon octavianus* GRICHANOV, nom. nov.

=*Katangaia longifacies* PARENT, 1933:12, nec Becker, 1922: 89, **comb. nov.**

*Type material examined.* ♂, Holotypus / [DR Congo:] Musee du Congo: Katanga: Jukafu, gol. forestiere, IX. 1930, Dr. M. BEQUAERT / *Katangaia longifacies* PARENT / R. Det. V-2414; ♂ Paratype [same label], *Katangaia longifacies* n.sp. PARENT, Cotype [RMCA].

*Material examined.* 1 ♀, Tanzania, West Usambara Mts., Mazumbai, 1600 m, 01.VIII.1980, M. STOLTZE & N. SCHARFF leg., Zool. Museum, København [ZMC].

*Etymology.* The species is named after Abbé Octave PARENT.

*Diagnosis.* Frons very short; 1 vertical and 1 postvertical, both setae microscopic. Palpus hardly visible under clypeus. Scape with very short hairs; Postpedicel with apical stylus.  $M_{1+2}$  with weak bosse alaire, slightly convergent to  $R_{4+5}$ ; *m-cu* 1.5 times longer than  $CuA_1$ . Hypopygium pedunculate, elongate. Cercus large, bilobate; ventral lobe of cercus strongly projected basad, with longish setae at basal and distal apices.

*Distribution.* Congo (Kinshasa), Tanzania (!).

## Genus *Tachytrechus* HALIDAY

The world fauna of the genus *Tachytrechus* includes about 130 species from all zoogeographical regions except Australian. The Afrotropical Region comprises 16 (including new) species found all over the continent. Afrotropical species of *Tachytrechus* differ from the related genera of Dolichopodinae in the complex of characters including several strong anterodorsal setae in apical half of the hind femur in addition to the true anterior subapical seta; the face is narrowed under antennae and somewhat widened towards clypeus; wing vein  $M_{1+2}$  usually has gentle curvation before the middle of distal part, running towards  $R_{4+5}$  and reaching costa far before the tip of wing; stylus is short and bare; postpedicel is usually short and suboval.

### 123. *Tachytrechus alternatus* CURRAN

*Material examined.* 1♀, South Africa: Natal, 15 km E Magudu, 2731DB, 20.II.1979 JGH LONDT, Banks of river [NMP]; 1♀, Botswana (B21), R. Nata, 20°42'S, 26°11'E, 23.IV.1972 / Southern African Exp., B.M. 1972-1 [BMNH]; 1♂, Uganda: Ruwenzori Range, XII.1934-I.1935, B.M.E. Afr. Exp., B.M. 1935-203 / Kilembe, 4500 ft., F.W. EDWARDS / on surface of small pool near river [BMNH].

*Diagnosis.* *T. alternatus* is characterised by the following features. Scape and pedicel yellow. Postpedicel mostly black. Costa without thickening in 2<sup>nd</sup> part.  $M_{1+2}$  straight in apical part. All coxae black. Legs simple, mostly yellow; hind tibia black at apex; hind tarsus entirely black. Fore tibia and tarsus with ventral pile of microscopic yellow hairs. Mid femur with shallow ventral excavation in basal third. Cercus dark-brown, rounded-oval, with long hairs, especially long ventrally.

*Distribution.* South Africa; Angola, Botswana (!), Uganda, Nigeria, Ghana.

### 124. *Tachytrechus amnoni* GRICHANOV, spec. nov.

(Figs. 136-137)

*Holotype*, ♂, Madagascar S., Ifarantsa, 20 km NW Fort Dauphin, 210.IV.1991, A. FREIDBERG & Fini KAPLAN [TAU].

*Paratype*, ♀ with the same label.

*Description.* Male. General coloration of body blue-black. Frons black-violet, densely brownish pollinose. One vertical, one postvertical, a pair of ocellar strong setae present. 10 upper and 3 lower postocular setae black; lateral postoculars white; ventral postcranium with several black setae. Eyes with short hairs, face bare. Face narrowest under antennae, gently widening towards clypeus; ratio of its width below antennae to height 13: 86; clypeus not reaching

lower margin of eyes, convex downward. Antenna slightly longer than height of head, mostly black; pedicel light-brown; postpedicel suboval, as long as high, with somewhat pronounced apex and microscopic hairs; stylus positioned at distal 1/3 of dorsal side, mostly black, bare, with broad flag in distal 2/5; the flag mostly black, white in distal 1/3, 3 times longer than wide in middle. Length ratio of scape to pedicel to postpedicel to 1<sup>st</sup> and 2<sup>nd</sup> segments of stylus to flattened part of stylus to white zone of flag, 15: 10: 15: 32: 74: 30: 10. Palpus and proboscis black, with short black hairs.

Thorax black, with violet reflection, densely pollinose; mesonotum brownish pollinose; pleura white pollinose. Anterior and posterior notopleural depressions seeming silvery under certain point of view. 6 dorsocentral setae, 2 rows of short acrostichals. Proepisternum with 1 strong seta and black hairs above coxa, several upper black cilia. Scutellum with 2 pairs of strong setae, with lateral setae 2/3 length of medians.

Legs mostly black; all coxae black with brownish apex, white pollinose; knees and tibiae yellow except for black distal apex of tibiae; fore basitarsus yellow in basal half; mid basitarsus yellow ventrally in basal half; hind basitarsus yellow ventrally at extreme base. Fore coxa with black hairs and several short apical setae. Fore femur bare. Fore tibia with 4 anterodorsal, 3 posterodorsal setae increasing in length distad, 2 strong posteroventral, 3-4 apical setae. Fore tarsus simple, without ventral pile; 1<sup>st</sup> to 4<sup>th</sup> segments each with 1 apicoventral seta nearly as long as next tarsomere. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 80: 130: 116: 47: 15: 14: 13: 15. Mid femur with row of 4-5 anterior setae in distal half and very small ventral swelling at basal third. Mid tibia with 2 dorsal, 5 anterodorsal, 2 posterodorsal, 3 anteroventral, 3 posteroventral and 5 apical setae. 1<sup>st</sup> to 4<sup>th</sup> segments of mid tarsus each with 2-3 elongate apicoventral setulae. Length ratio of mid coxa to femur to tibia to tarsus (segments from first to fifth), 65: 145: 165: 80: 35: 28: 21: 22. Hind femur with anterodorsal row of 4-5 setae in apical half in addition to subapical anterior seta. Hind tibia with 5-6 anterodorsal, 5-6 posterodorsal, 2 strong and 5-6 hairlike ventral, 3-4 apical setae. Hind basitarsus with 1 basoventral, 3-4 short apical setae; 2<sup>nd</sup>-4<sup>th</sup> segments with elongate apicoventral setulae. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 50: 153: 187: 65: 66: 40: 27: 23.

Wing practically hyaline, without distinct spots, but greyish in places. Costal vein with thickening in middle half of 2<sup>nd</sup> part.  $R_1$  0.4 times as long as wing.  $R_{2+3}$  and  $R_{4+5}$  almost straight except for their slightly divergent apices. Ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$ , 40: 8.  $M_{1+2}$  in distal part nearly straight, with very weak flexion at basal 1/3 of its distal part, joining costal vein far before wing tip. Distal part of  $M_{1+2}$  as long as proximal part. Crossvein *m-cu* straight, oblique. Cross-vein *m-cu* equal in length to or slightly longer than apical part of  $CuA_1$ . Anal vein distinct, nearly reaching to wing margin; anal angle right. Lower calypter yellow, with black setae. Hal-

ters reddish.

Abdomen metallic dark, green-blue-violet, whitish pollinose, with black hairs and marginal setae. 8<sup>th</sup> segment black, with short sparse black hairs. Epanthrium greenish-black, large. Hypandrium 2/5 length of epanthrium, bilobate; ventral lobe long, with 2 preapical denticles. Aedeagus with middorsal lobe. Epandrial lobe prominent, with two apical setae. Surstylus brown, two pairs, covered with short simple setae as figured; ventral lobe of surstylus with strong dorsal seta at 2/3 directed basad. Cercus brown-black, rounded-triangular, with simple black cilia; the cilia ventrally as long as diameter of cercus.

Female. Female similar to male except as follows. Face somewhat wider, as wide as height of postpedicel. Antenna simple, as long as head height. Costa inconspicuously thickened in the middle of 2<sup>nd</sup> part.

Length (mm): body 5.5, antenna 1.5 (female) - 1.8 (male), wing 4.7/1.6, hypopygium 2.0.

*Diagnosis.* The new species keys out to *T. kenyensis*, differing from the latter in almost entirely black femora, ornamented stylus etc.

*Distribution.* Madagascar.

### 125. *Tachytrechus bracteatus* (WIEDEMANN)

*Type material examined.* Holotype: ♀, [Kenya:] Kilimandj., Sjöstedt, 1905-1906 / 8 Sept. / *Hercostomus muscarius* P. Speiser det. Type! [NHRS].

*Material examined.* 1♂, Swaziland, #45, 13 km N of Ngogolo, 26°19' S, 31°38' E, 300 m, Date: 22-24.IV.1991, J. LONDT & L. SCHOEMAN, Penata Ranch/Bushveld; 2♂♂, 4 ♀♀, RSA: KZ-Natal, Estcourt, 29°51' E, 29°12' N, 1492 m, Date: 4.V.1994, Coll.: Barley; S. Africa: Cape, #18, 5 km N of Barkly East, 30°55' S, 27°36' E, 1780 m, 2.III.1992, Beeskraalse loop, riparian grass, J. LONDT & A. WHITTINGTON; South Africa: Cape, Bidouw, 10.XI.1992, J. Manning; S. Africa: Cape, #46, Helderberg Nature Res., 34°04' S, 18°52' E, 180 m, Date: 4.X.1993, Coll.: J.G.H. LONDT, Hillside macchia; 6 ♂♂, 3 ♀♀, Kenya: Nakuru, #77, Hell's Gate Nat. Park, 00°57' S, 36°19' E, 1900 m, Date: 26.XI.1992, A. WHITTINGTON & J. LONDT, Ngorowa Gorge / stream; 1♀, S. Africa: Cape, #20, 7 km S Prince Albert, 33°18' S, 22°03' E, 1000 m, Date: 24.XI.1990, LONDT & WHITTINGTON, Bottom Swartberg Pass; 2♂♂, 5♀♀, South Africa: Natal, Royal Natal Nat Park, 28°41' S, 28°59' E, JGH LONDT, 18.III.1989, Sanders Falls area; 3 ♂♂, 9 ♀♀, South Africa: Cape, Mountain Zebra Natl. Park, 1400 m, March 12, 1972, ME & BJ IRWIN, 3225Ab [NMP]; 1♂, 3♀♀, Congo Belge: Kivu, Goma (km 202 route Sake [Rt. Bukavu]), 12.III.1953 [21.III.1953], J. VERBEKE - KEA [ISNB]; 2♂♂, 1♀, Republic of South Africa, Cape Province, 10 km S of Citrusdal, Kornlandskloof, Malaise trap (S32°40', E19°02'), 5-9.X.1994, Malaise trap, marshy meadow at riverside, at side of small marsh surrounded by indigenous shrubs near river, Small marsh bordered by fynbos on mountain slope, leg. Michael SÖDERLUND [NHRS].

*Diagnosis.* Antenna black; stylus simple. Legs simple, mostly yellow. Femora black in basal half. Fore femur ventrally bare. Mid femur with shallow ventral excavation in basal fourth. Wing with dull spots at *m-cu* and *M*<sub>1+2</sub> curvation. Costa thickened. Cercus black, broad, semilunular, with acute basoventral apex and long black simple cilia along ventral margin.

*Distribution.* South Africa; Malawi, Congo (Kinshasa), Kenya (!), Swaziland (!).

### 126. *Tachytrechus elegans* PARENT

*Type material examined.* Holotypus, ♂ [red label] / [DR Congo:] Musee du Congo, Ituri: Sesenge: Ndua (Farnoye), 15.II.1930, A. COLLART / R. Det. N. 2414 / *Tachytrechus elegans* n.sp. Type. O. PARENT [RMCA].

*Material examined.* ♂, Musée du Congo, Bangala: Diobe, 29-XI-1927, A. COLLART / *Tachytrechus elegans* PAR. ♂, det. O. PARENT [MNHP].

*Diagnosis.* *T. elegans* differs from other species in having yellow scape and pedicel, fore tibia being flattened in apical third and white in apical fourth, all tarsi being simple, and cercus being brown, rounded-oval, with short hairs.

*Distribution.* Congo (Kinshasa).

### 127. *Tachytrechus imperator* CURRAN

*Material examined.* 1♀, South Africa: W. Cape, #4, Robinson Pass, 3322Cc, 35 km N Mossel Bay, 12.I.1983, mnt spring, R. MILLER & P. STABBINS [NMP].

*Diagnosis.* *T. imperator* differs from other species in entirely black antenna and legs. Wing without spots; costa thickened in basal section; *M*<sub>1+2</sub> weakly sinuate in distal part. Legs simple; femora without long setae, with elongate ventral hairs. The species differs from closely related *T. petraeus* in subtriangular, rather than rounded, cercus.

*Distribution.* South Africa.

### 128. *Tachytrechus kenyensis* (PARENT)

*Type material examined.* ♂, mars / Kenya, Suam fishing hut, Mt. Elgon Vers Est 2400 m / Museum Paris, Miss. de L'OMO, C. ARAMBOURG, P.-A. CHAPPUIS & R. JEANNEL 1932-33 / Type [red label] / *Tachytrechus kenyensis* n.sp. Type, O. PARENT [MNHP].

*Material examined.* 1♀, Tanganyika: Rungve Mt., 2600 m, 20 mi. SSE Mvoya, leg. G. HEINRICH, 1962 [NHRS].

*Diagnosis.* Scape and pedicel yellow; postpedicel black. Wing maculated at *m-cu* at *M*<sub>1+2</sub> curvation. Costa thickened in basal section (males). Legs simple. All coxae black. Fore femur mostly black; other podomeres dirty-yellow,



partly blackish; mid femur with shallow ventral excavation in basal third; fore tibia and tarsus slightly thickened. Cercus black-brown, subtriangular, with distinct apicoventral and apicodorsal angles, convex distal margin and simple black cilia half as long as cercus width.

*Distribution.* Kenya; Tanzania (!), Congo (Kinshasa).

### 129. *Tachytrechus luteicoxa* PARENT

*Type material examined.* ♂, Museum Paris, Côte d'Ivoire, DR. BOUET, 1908 / Kenya, Suam fishing hut, Mt. Elgon Vers Est 2400 m / *Tachytrechus luteicoxa* n.sp., O. PARENT det / Type [red label] [MNHP]; Paratypes [red label], 2 ♂♂, 2 ♀♀ / Musée du Congo, Liberia: Moala, 31.X.1926, Dr. J. BEQUAERT / R. Det. 1954-T / Paratype, *Tachytrechus liberia* CURRAN [yellow label] / *Tachytrechus liberia* CURRAN, det. C.H. CURRAN [RMCA].

*Material examined.* 6 ♂♂, 7 ♀♀, Congo Belge: P.N.G. Miss H. DE SAEGER, [27.VII.1951, 28.X.1951, 17.XII.1951, 18.XII.1951], H. DE SAEGER [RMCA]; ♂, S. Africa, Natal, #15, Hawaan Forest, Umhlanga, 29°43'S, 31°05'E, 20 m, 27.II.1992, BARRACLOUGH & WHITTINGTON, indig. dune forest nr. lagoon [NMP].

*Diagnosis.* *T. luteicoxa* differs from other species in mostly yellow antenna and legs including fore coxa; legs simple; costa thickened in basal part. Male face golden, female face whitish. Fore tibia with 3 antero-, 1 posterodorsal, 2 anteroventral setae; fore tarsus without pile. Mid tibia with 3 antero-, 3 posterodorsal, 3 ventral setae. Hind tibia with 4 antero-, 4 posterodorsal, 3 ventral setae. Length ratio of basitarsus to second segment (legs I, II, III), 2.5: 1; 2.5: 1; 2/3: 1.  $M_{1+2}$  with angular curvation before the middle of apical part. Apical part of  $CuA_1$  2/3 the length of *m-cu*. Cercus brown, somewhat widened distad, with widely rounded angles and short, slightly curved cilia.

*Distribution.* Ivory Coast, Liberia, Ghana, Sierra Leone, Nigeria, Cameroon, Uganda, South Africa (!).

### 130. *Tachytrechus tessellatus* (MACQUART)

*Type material examined.* Lectotype [here designated], ♂, Nr. 1045, *Dolichopus tessellatus* [on pin] / Senegal, GUÉRIN [on pin] / *D. tessellatus* MACQ. Mr. GUÉRIN, Senegal, 895 [separate labels; MNHP]; [holotype], ♂, Ins. Cabo Verde, S. Antão, Rib. Grande, 27-28.12.1953, LINDBERG / Spec. typ. [red label] / *Hercostomus ponderosus* FREY [separate label; ZMH]; [paratypes], 1 ♂, 4 ♀♀, same first label [ZMH].

*Material examined.* 1 ♂, Kenya, Tsavo East, ATI River, X.1997, E. POEL-HELINGA [ZMA]; 1 ♂, Mugango, a. Victoria See, 19-25.III.1952, D.O. Africa Exp. [SMFD]; 1 ♂, 2 ♀♀, Cameroon, Kribi (beach), 28-29.XI.1987, A. FREIDBERG, Fini KAPLAN [TAU]; 1 ♂, 2 ♀♀, Swaziland, #49, Sand River, Res-

ervoir, 25°59' S, 31°42' E, 300 m, Date: 26.IV.1991, J. LONDT & L. SCHOEMAN, Woodland on E. shore; 6 ♂♂, 5 ♀♀, S. Africa: Cape, #9, 2 km NE Steytlerville, 33°18' S, 24°22' E, 500 m, Date: 22.XI.1990, WHITTINGTON & LONDT, Noorspoort River bed; South Afr., Cape Prov., E Grahamstone, 3326 BC, 2&5.I.1986, J. & B. LONDT, Belmont Valley, Malaise; South Africa, Cape Prov., Umngazi Mouth, 3129Da, 20-X-1972, ME IRWIN, 3 to 10 m, coastal dunes; 1 ♂, 1 ♀, South Africa: Natal, False Bay Park Re., 2832Ab, Charters Creek Camp, ca. 27°58' S, 32°22' E, Sand Forest, J. LONDT, 30.I-1.II.1988, 40 m, Mpophomeni Trail area; 5 ♂♂, 4 ♀♀, South Africa, Natal Prov., Zululand, Charter Creek, St. Lucia Game Res., Nov. 25, 1971 (2832Ab), ME & BJ IRWIN; 1 ♀, N.E. Zoutp. Dist., 7&8.[19]16, H.G. BREYER [NMP]; 1 ♂, 10 ♀♀, Urundi, Usumbura [Bururi; Imbo], 10-IV-1953 [10.X.1948; 19.IV.1953], alt. 780 m [2000 m], F. FRANÇOIS / R. I. Sc. N. B. I.G. 24.452 (1 ♂, 8 ♀♀ with additional label: Colline Usumbura, Imbo, alt. 780 m) [ISNB]; 8 ♀♀, Congo Belge: Tang., emb. Lubuy, U.V., 19.VIII.1953 [ISNB]; 2 ♀♀, Congo Belge: Lac Tanganyika: Albertville, Lubuy, 26.VIII.1953, J. VERBEKE - KEA, U.V. [ISNB]; 3 ♂♂, 5 ♀♀, Albertville, 13.XI.1946, Miss. Tanganyika, N. Riv. Kalemie [ISNB].

*Diagnosis.* *T. tessellatus* is characterised by the following features. Scape and pedicel yellow. Postpedicel mostly black. Costa thickened in 2<sup>nd</sup> part.  $M_{1+2}$  with angular curvation before the middle of distal part. All coxae black. Legs simple, mostly yellow; hind tibia black at apex; hind tarsus entirely black. Fore tibia and tarsus with ventral pile of short yellow hairs. Mid tibia with 4 antero-, 3 posterodorsal, 3 antero- and 3 posteroventral setae. Cercus dark-brown, rounded-oval, with long hairs, especially long ventrally.

*Distribution.* Senegal; Gambia, Cape Verde Is., Nigeria, Cameroon (!), Congo (Kinshasa), Burundi, Tanzania, Kenya (!), Aldabra, Ethiopia, South Africa, Swaziland, Malawi, Angola, Namibia, Botswana, Mozambique, Madagascar, Mauritius, Seychelles, Socotra, Egypt, Israel; Oriental Region, New Caledonia.

## KEY TO AFROTROPICAL GENERA OF DOLICHOPODINAE

1. Wing vein  $M_{1+2}$  broken in middle of distal part, joining costal vein just before wing tip, having two stublike veins;  $R_{4+5}$  and distal part of  $M_{1+2}$  nearly parallel; hind basitarsus with a distinct bristle above ..... *Lichtwardtia*  
–  $M_{1+2}$  not broken as above,  $R_{4+5}$  and distal part of  $M_{1+2}$  usually converging ... 2
2. Hind basitarsus with 1-3 strong setae above;  $M_{1+2}$  sigmatoid at middle of distal part, sometimes with a stublike vein ..... *Dolichopus*  
– Hind basitarsus without setae above, rarely with 1-2 feeble dorsal setae, slightly longer than diameter of basitarsus ..... 3
3. Hind coxa without strong external bristle; frons low, antennae positioned at the top of head; scape microscopically haired ..... *Polymedon*  
– Hind coxa with 1 strong external seta; frons high ..... 4
4. Several strong anterodorsal setae in apical half of the hind femur in addition to the true anterior subapical seta; face narrowed under antennae and somewhat widened towards clypeus; wing vein  $M_{1+2}$  usually with gentle curvature before the middle of distal part, then running towards  $R_{4+5}$  and reaching costa far before the tip of wing; stylus short and bare; postpedicel usually short and suboval ..... *Tachytrechus*  
– Hind femur usually with one true anterior subapical seta; face regularly narrowed towards clypeus or parallel-sided; wing vein  $M_{1+2}$  either with curvature beyond the middle of distal part or  $M_{1+2}$  reaching costa near the tip of wing; stylus often pubescent; postpedicel usually subtriangular, asymmetric ..... 5
5. Wing vein  $M_{1+2}$  straight or inconspicuously sinuate in basal 1/3 of distal part, usually joining costal vein just before wing tip;  $R_{4+5}$  and  $M_{1+2}$  weakly convergent in distal part; mid and hind femora always with one strong anterior subapical seta positioned just before apex ..... *Hercostomus*  
– Vein  $M_{1+2}$  usually distinctly bent in distal part with strongly convergent  $R_{4+5}$  and  $M_{1+2}$ ; if  $R_{4+5}$  and  $M_{1+2}$  straight and parallel to each other, then subapical seta positioned at distal third or just behind the middle of hind femora; mid femur sometimes with 2 or more strong anterior subapical setae ..... 6
6. Head distinctly wider than high; face wide in both sexes, about 2 times wider than height of postpedicel; female oviscapt usually with strong ventral lobes, exposed ..... *Argyrochlamys*  
– Head not wider than high; face usually narrow; male face much narrower than female face; female oviscapt usually hidden, simple ..... *Paracleius*

## KEYS TO AFROTROPICAL SPECIES OF DOLICHOPODINAE

### Genus *Argyrochlamys* LAMB

1. Setation of body and legs entirely light; stylus much shorter than postpedicel in both sexes ..... *A. angolensis*  
– Setation of body and legs mostly black; stylus not shorter than postpedicel .. 2
2. Apical section of  $M_{1+2}$  in middle with nearly right-angular curvature; female postpedicel as long as high, with distinctly dorsal stylus ..... *A. impudicus*  
– Apical section of  $M_{1+2}$  in middle with gentle curvature; female postpedicel 1.7 times as long as high, with practically apical stylus ..... *A. erythraeus*

### Genus *Dolichopus* LATREILLE

1. Lower postocular setae black; male hind femur bare ventrally, with row of several anterodorsal setae in apical half; 2<sup>nd</sup>-5<sup>th</sup> segments of mid tarsus flattened; 5<sup>th</sup> segment of same tarsus plumose ..... *D. afrourungulatus*  
– Lower postocular setae white; male hind femur with or without long yellow ventral cilia ..... 2
2. Lower calypter with white cilia; hind basitarsus with 1 dorsal seta; mid basitarsus without dorsal seta; all tarsi simple ..... *D. flavocrinitus*  
– Lower calypter with black cilia; hind basitarsus with 2-3 dorsals ..... 3
3. Mid basitarsus with 1 dorsal seta; male 2<sup>nd</sup>-4<sup>th</sup> segments of fore tarsus with row of erect curved hairs; 5-6 mm ..... *D. festinus*  
– Mid basitarsus bare; fore tarsus simple; smaller species ..... *D. sabinus*

### Genus *Hercostomus* LOEW

1. Some apical segments of hind tarsus ornamented with remarkable cilia, or flattened, widened and shortened, or silvery-white pilose; fore tibia usually with long fine apicoventral seta ..... 2  
– Hind tarsi simple, 3-5<sup>th</sup> segments entirely black-brown, with black setulae; fore tibia usually with short apical setae ..... 11
2. Hind basitarsus with 1 or 2 dorsal setae ..... 3  
– Hind basitarsus without dorsal setae ..... 4
3. Three apical segments of hind tarsus silvery white; cercus with several strong falcate setae ..... *H. congoensis*  
– Only 5<sup>th</sup> apical segment of hind tarsus silvery white; cercus with simple cilia only ..... *H. ultimus*
4. 3<sup>rd</sup>-4<sup>th</sup> segments of hind tarsus short, flat, strongly widened, plumose, each approximately 2 times longer than wide; cercus subtriangular, large, half as long

- as epandrium, with several falcate setae at distal apex ..... *H. straeleni*  
 – 3<sup>rd</sup>-4<sup>th</sup> segments of hind tarsus with short setulae, each at least 3 times longer than wide; cercus usually small, rarely with falcate setae ..... 5  
 5. 4<sup>th</sup> segment of mid tarsus with rows of numerous black bristles above and below; the dorsal ones being in length about 3 times the width of basitarsus; 5<sup>th</sup> segment of mid and hind tarsi dorsally silvery pilose ..... *H. jani*  
 – 4<sup>th</sup> segment of mid tarsus with simple setae; usually 3 apical segments of hind tarsi dorsally silvery pilose ..... 6  
 6. 5<sup>th</sup> segment of mid tarsus silvery pilose dorsally; cercus with rounded distodorsal and basoventral apices and several falcate setae at distal margin ..... 7  
 – Apical segments of mid tarsus entirely black; cercus with acute distodorsal apex ..... 8  
 7. Two apical segments of hind tarsus flattened and silvery; 3<sup>rd</sup> segment of the same tarsus not flattened, silvery white only in distal half. ....  
 ..... *H. argyropus par*  
 – Three apical segments of hind tarsus flattened and silvery. ....  
 ..... *H. argyropus argyropus*  
 8. Cercus large, with several falcate setae at distodorsal apex and strong dorsal subapical seta ..... 9  
 – Cercus without falcate setae at distodorsal apex ..... 10  
 9. Antenna mostly yellow; hind femur and tibia yellow; hind basitarsus yellow except apex; cercus elongate, with rounded basoventral margin .... *H. golubtsovi*  
 – Antenna entirely black; hind femur with black spot at apex; hind tibia brown with black apex; hind basitarsus black; cercus almost regularly triangular *H. afer*  
 10. Three apical segments of hind tarsus entirely yellow-white; cercus with rounded ventral apex ..... *H. eronis*  
 – Three apical segments of hind tarsus black ventrally and silvery-white pilose dorsally; cercus with pointed ventral apex ..... *H. blagoderovi*  
 11. 3<sup>rd</sup> segment of fore tarsus compressed and widened ..... 12  
 – 3<sup>rd</sup> segment of fore tarsus neither flattened nor widened ..... 27  
 12. 2<sup>nd</sup> segment of fore tarsus as long as fore tibia; 3<sup>rd</sup> segment of fore tarsus equal to 5<sup>th</sup> ..... *H. heinrichi*  
 – 2<sup>nd</sup> segment of fore tarsus much shorter than fore tibia; 3<sup>rd</sup> segment of fore tarsus usually not equal to 5<sup>th</sup> ..... 13  
 13. 3<sup>rd</sup> and 4<sup>th</sup> segments of fore tarsus shortened; 3<sup>rd</sup> segment not longer than 5<sup>th</sup>; cercus with large basolateral lobe bearing several short setae; cercus with long narrow apex bearing several long setae ..... 14  
 – 4<sup>th</sup> and 5<sup>th</sup> segments of fore tarsus shortened; 3<sup>rd</sup> segment longer than 5<sup>th</sup>; cercus various, rarely with drawn-out apex ..... 17  
 14. 4<sup>th</sup> segment of the fore tarsus with short dorsal lobe; 3<sup>rd</sup> segment nearly equal to 5<sup>th</sup> ..... *H. patellitarsis*  
 – 4<sup>th</sup> segment of fore tarsus without lobe; 5<sup>th</sup> segment at least twice longer than 3<sup>rd</sup> ..... 15

15. Fore tibia mostly brown, white and swollen in distal 1/3; 2<sup>nd</sup> segment of fore tarsus white ..... *H. freidbergi*  
 – Fore tibia yellow; 2<sup>nd</sup> segment of fore tarsus mostly black ..... 16  
 16. 2<sup>nd</sup> segment of fore tarsus with row of hooked cilia; 5<sup>th</sup> segment 3 times longer than 3<sup>rd</sup> ..... *H. enghoffi*  
 – 2<sup>nd</sup> segment of fore tarsus with simple setulae; 5<sup>th</sup> segment 2 times longer than 3<sup>rd</sup> ..... *H. selikhovkini*  
 17. Cercus with large fungaceous basolateral process bearing fan of at least 5 long strong setae; the setae at least as long as cercus ..... 18  
 – Cercus with short narrow process or low prominence at base, bearing at most 3 strong setae ..... 22  
 18. Wing anal lobe with broad and deep postero-proximal emargination ..... 19  
 – Posterior wing margin evenly convex ..... 20  
 19. Postpedicel slightly longer than high; 4-5<sup>th</sup> segments of fore tarsus having a fringe of white erect cilia ..... *H. balensis*  
 – Postpedicel 2.5-3 times longer than high; 4-5<sup>th</sup> segments of fore tarsus with mostly black accumbent setulae ..... *H. kefaensis*  
 20. 3<sup>rd</sup> segment of fore tarsus 1/3 or 2/5 the length of 2<sup>nd</sup>; cercus with only several long cilia in distal part; basolateral process of cercus comparatively small, 1/3 the length of cercus, with 5-6 long setae ..... *H. yakovlevi*  
 – 3<sup>rd</sup> segment of fore tarsus 3/5 to 3/4 the length of 2<sup>nd</sup>; cercus densely covered with long hairs in distal part; basolateral process of cercus large, with at least 10 long setae ..... 21  
 21. 3<sup>rd</sup> segment of fore tarsus strongly widened, about 3 times longer than wide; basolateral process of cercus with about 20 long setae ..... *H. scotti*  
 – 3<sup>rd</sup> segment of fore tarsus weakly widened, at least 4 times longer than wide; basolateral process of cercus with about 10 long setae ..... *H. ozerovi*  
 22. Cercus with 2 lateroventral processes; 3<sup>rd</sup> segment of fore tarsus strongly widened; 7<sup>th</sup> segment of abdomen at least 1/3 longer than epandrium ..... 23  
 – Cercus with one basolateral prominence; 3<sup>rd</sup> segment of fore tarsus usually weakly widened; 7<sup>th</sup> segment of abdomen equal to or shorter than epandrium 24  
 23. 3<sup>rd</sup> segment of fore tarsus nearly equal in length to 2<sup>nd</sup>; distoventral process of cercus narrow, as wide as basoventral process ..... *H. perturbus*  
 – 3<sup>rd</sup> segment of fore tarsus approximately half as long as 2<sup>nd</sup>; midventral process of cercus wide, 2 times wider than basoventral process ..... *H. wittei*  
 24. 3<sup>rd</sup> segment of fore tarsus half as long as 2<sup>nd</sup> or shorter; 1<sup>st</sup> segment of same tarsus shorter than 2<sup>nd</sup>; epandrium slightly projected apicoventrally; cercus with long and narrow distal part ..... 25  
 – 3<sup>rd</sup> segment of fore tarsus 2/3 the length of 2<sup>nd</sup>; 1<sup>st</sup> segment of same tarsus longer than 2<sup>nd</sup>; epandrium strongly projected apicoventrally; cercus relatively broad ..... 26  
 25. 2<sup>nd</sup> segment of fore tarsus slightly longer than 1<sup>st</sup> and 2 times longer than 3<sup>rd</sup>; mid tibia without ventral seta ..... *H. tobiassi*

- 2<sup>nd</sup> segment of fore tarsus 2 times longer than 1<sup>st</sup> and 4 times longer than 3<sup>rd</sup>; mid tibia with ventral seta at 2/3 ..... *H. ngozi*
26. Cercus truncated at apex, with distinct basolateral prominence bearing 2-3 strong setae ..... *H. mostovskii*
- Cercus somewhat projected apicoventrally, with dorsal subapical tubercle and indistinct basolateral prominence ..... *H. krivosheinae*
27. Some segments of mid tarsus ornamented or silvery-white ..... 28
- Mid and fore tarsus simple, rarely apical segments of fore tarsus shortened and 4-5<sup>th</sup> segments of the same tarsus slightly thickened ..... 29
28. 5<sup>th</sup> segment of mid tarsus yellow or silvery-white and clothed with pale hairs; fore tarsus simple; 5 mm ..... *H. dimidiatus*
- 2<sup>nd</sup>-4<sup>th</sup> segments of mid tarsus each having 2 apicodorsal long cilia; 1<sup>st</sup>-4<sup>th</sup> segments of fore tarsus each with pair of apicoventral setulae and pair of tiny curved apicoventral hairs, as long as diameter of tarsomere; 4.6 mm ..... *H. caprivi*
29. Legs mostly yellow, hind femur blackish or brown in at least apical half; postpedicel with basodorsal stylus; stylus distinctly pubescent; male cercus narrow, often ornamented with processes or bunches of long cilia ..... 30
- Femora entirely yellow; postpedicel usually with middorsal stylus, which microscopically pubescent ..... 41
30. Cercus with brush or fan of long cilia, longer than cercus ..... 31
- Cercus with cilia, at most half as long as cercus ..... 36
31. Cercus with basal fan of cilia directed distad ..... 32
- Cercus with brush of cilia directed either dorsad or ventrad ..... 33
32. Cercus with two narrow short subequal apical processes ..... *H. itineris*
- Cercus with single broad fingerlike apical projection ..... *H. laanmae*
33. Cercus with basodorsal brush of glued cilia, twice longer than cercus ..... 34
- Cercus with middorsal or basoventral brush of cilia, slightly longer than cercus ..... 35
34. Cercus with long ventral lobe ..... *H. pseudolictor*
- Cercus without ventral lobe ..... *H. lictor*
35. Cercus with middorsal brush of four cilia ..... *H. duviardi*
- Cercus with basoventral brush of glued cilia ..... *H. garambensis*
36. Cercus bilobate, with apical brush of long cilia on both lobes; fore tibia slightly thickened ..... *H. strictilamellatus*
- Cercus simple, more or less evenly covered with cilia; fore tibia usually simple ..... 37
37. Cercus short, at most 3 times longer than wide, slightly longer than surstylus, half as long as height of epandrium ..... *H. minimixtus*
- Cercus at least 5 times longer than wide, approximately equal in length to height of epandrium ..... 38
38. Cercus yellow, bare in middle third; surstylus large, at least half as long as cercus ..... 39
- Cercus brown, densely covered with long hairs; surstylus reduced ..... 40

39. Cercus covered with hairs not longer than width of cercus; surstylus massive, nearly reaching to apex of cercus ..... *H. krivokhatskii*
- Cercus covered with hairs distinctly longer than width of cercus; surstylus narrow, half as long as cercus ..... *H. rezniki*
40. Cercus beyond middle with ventral swelling bearing group of long cilia in addition to long cilia at apex and at base of cercus ..... *H. panteleevae*
- Cercus gradually narrowed distad and evenly covered with long cilia ..... *H. ovchinnikovae*
41. Lower postocular setae black ..... 42
- Lower postocular setae white ..... 45
42. Wing with subtriangular blackish projection just behind apex of M<sub>1+2</sub> ..... *H. turneri*
- Wing simple ..... 43
43. R<sub>4+5</sub> and M<sub>1+2</sub> distinctly convergent; thorax mostly yellow *Paracleius mottusi*
- R<sub>4+5</sub> and M<sub>1+2</sub> parallel; thorax mostly black ..... 44
44. Cercus subtriangular, black ..... *H. intercedens*
- Cercus elongate-oval, yellow ..... *H. scharffi*
45. Postpedicel shorter than high; cercus yellow, large, semilunular, with rounded distal margin having pale short cilia; 3 mm ..... *H. rhodesiensis*
- Postpedicel 1.5 times longer than high; cercus with large basolateral lobe bearing several strong setae and narrow distal part having several long cilia at apex; 3.0-4.5 mm ..... *H. nectarophagus*

### Genus *Lichtwardtia* ENDERLEIN

1. At least hind femur and tibia mostly blackish-brown ..... 2
- Femora and tibiae yellow; rarely hind tibia blackish in distal 1/3 or all tibiae partly blackish ..... 3
2. Wing distinctly maculated at M<sub>2</sub> and *m-cu*; postpedicel usually 1.5-2 times longer than high, with drawn-out or acute apex ..... *L. angularis*
- Wing hyaline; postpedicel rounded; Eritrea ..... *L. aethiopica*
3. Postocular setae entirely black ..... 4
- Lower postoculars white ..... 6
4. Costa with long and broad thickening in basal half of wing; body 1.8 mm ..... *L. mironovi*
- Costa simple or with punctiform thickening at R<sub>1</sub>; larger species ..... 5
5. Epistome mat-black, clypeus silvery-white pollinose; all tibiae partly blackish on dorsal side ..... *L. nigrifacies*
- Face almost entirely white pollinose, metallic under antennae only; tibiae entirely yellow ..... *L. angulicornis*
6. Last two segments of hind tarsus dilated; cercus triangular, longer than epandrium, with long pointed apex ..... *L. sukharevae*
- Hind tarsus simple; cercus small, usually rounded or oval, at most 1/3 as long

- as epandrium ..... 7
7. Epistome entirely metallic bluish-green; clypeus weakly pollinose ..... 8
- Face densely white pollinose, rarely metallic shining under antenna; distoventral epandrial lobe simple or absent ..... 9
8. Wing with wide grey limb along margins, maculated at  $M_2$  and  $m-cu$ ; distoventral epandrial lobe reduced; hypandrium with dorsal tooth ..... *L. maculata*
- Wing evenly greyish, without spots; distoventral epandrial lobe bifurcated; hypandrium without tooth ..... *L. nigrotorquata*
9. Hind basitarsus with 1 reduced dorsal seta, at most 1/3 as long as basitarsus; cercus elongate-oval, twice longer than wide, with acute apex ..... 10
- Hind basitarsus with 1 strong dorsal seta, half as long as basitarsus; cercus usually rounded or subtriangular, at most 1.5 times longer than wide, rarely with distinct apex ..... 11
10. Distal part of  $M_{1+2}$  (from  $m-cu$  to  $m-m$ ) 1.5 times longer than  $m-cu$  and 2/3 as long as distal part of  $M_1$  (from  $m-m$  to C); 2.25 mm ..... *L. minuscula*
- Distal part of  $M_{1+2}$  equal in length to  $m-cu$  and 1/3 as long as distal part of  $M_1$ ; 2.6–3.0 mm ..... *L. emelyanovi*
11. Fore tibia with one strong and long posterior seta, at least twice longer than diameter of tibia; distoventral epandrial lobe undeveloped, with epandrial setae raising from epandrium ..... 12
- Fore tibia with one fine posterior seta, not longer or slightly longer than diameter of tibia; distoventral epandrial lobe digitiform, though often concealed, bearing 2 setae ..... 14
12. Wing distinctly maculated at  $M_2$  and  $m-cu$ ; postgonite broad and rounded at apex; cercus rounded or oval, without distinct apex ..... *L. angularis*
- Wing evenly greyish or slightly infumated at  $M_2$  and  $m-cu$ ; postgonite narrow and pointed at apex; cercus with distinct distodorsal apex ..... 13
13. Postpedicel 1.5 times longer than high; hind tibia yellow; costa with punctiform thickening at apex of  $R_1$ ; hypandrium with dorsal subapical tooth; ventral lobe of surstylus broad, with long basoventral seta and long thick apical spine directed basad ..... *L. hollisi*
- Postpedicel as long as high; costa simple; hind tibia blackened in distal 1/3; hypandrium with dorsal subapical tooth; ventral lobe of surstylus broad, with long basoventral seta and long thick apical spine directed basad ..... *L. hilgerae*
- Postpedicel as long as high; hind tibia yellow; costa simple; hypandrium without dorsal tooth; ventral lobe of surstylus narrow, with short setae ..... *L. tikhonovi*
14. Wing with wide grey limb along margins, maculated at  $M_2$  and  $m-cu$ ; epistome metallic green under antennae, with broad metallic longitudinal stripe in middle; male postpedicel at least 2 times longer than high ..... *L. maculata*
- Wing evenly greyish, without spots; epistome entirely pollinose; postpedicel no more than 1.5 times longer than high ..... 15
15.  $CuA_1$  1.5 times longer than  $m-cu$ ; face 3 times higher than wide; hypan-

- drium without dorsal tooth; postgonite broad and rounded at apex *L. nikolaevae*
- $CuA_1$  usually barely longer than  $m-cu$ ; face at least 3.5–4 times higher than wide; hypandrium with dorsal subapical tooth; postgonite narrow to apex .... 16
16. Costa simple or with punctiform thickening at  $R_1$ ; face usually 3.5–4 times higher than wide; cercus with simple setae ..... *L. fractinervis*
- Costa with long stigma at  $R_1$ ; face 10 times higher than its minimal width; cercus with several blunt flat setae at apex ..... *L. clypeata*

### Genus *Paracleius* BIGOT

1. All femora mostly black, sometimes fore femur orange-brown ..... 2
- Femora yellow, sometimes hind femur mostly black or some femora blackish dorsally 13
2. Lower postocular setae white ..... 3
- Lower postocular setae black ..... 5
3.  $M_{1+2}$  gently curved towards  $R_{4+5}$ ; fore femur brownish dorsally at apex; mid and hind femora brownish dorsally along entire length ..... *P. congoensis*
- $M_{1+2}$  with angular curvature in distal part; all femora black ..... 4
4. Antenna mostly orange-yellow; postpedicel with black spot at base of stylus; wing broad, brownish; 4.5 mm (female) ..... *P. latipennis*
- Antenna mostly black; scape and pedicel orange ventrally; wing almost hyaline; about 3 mm (male) ..... *P. biadimbi*
5. Legs entirely deep black ..... *P. thompsoni*
- At least tibiae mostly yellow (males) ..... 6
6. Fore tibia with ventral group of very long cilia at middle; fore femur with 6 ventral setae, longer than femur diameter ..... 7
- Fore tibia without unusual cilia at middle ..... 8
7. Fore tibia with 3 strong dorsal setae and ventral group of 15 very long undulate semierect black hairs in 3<sup>rd</sup> quarter, 2–3 times longer than diameter of tibia .  
..... *P. ogojaensis*
- Fore tibia with 3 anterodorsal, 3 posterodorsal setae and 4 long ventral cilia in middle; hind femur with 3 long anteroventral cilia in distal 1/3, almost equal in length to diameter of femur ..... *P. upembaensis*
8. Mid tibia with anterior row of numerous very long setae ..... *P. miritarsus*
- Mid tibia with ordinary setae ..... 9
9. Mid femur with ventral flat comb of setae, as long as diameter of femur ... 10
- Mid femur with anteroventral pile of setulae, at most half as long as diameter of femur, or/and with sparse setae ..... 11
10. Fore tarsus mostly black; fore basitarsus except apex and 5<sup>th</sup> tarsomere yellow; hind tarsus black; fore basitarsus thickened in basal 2/3; mid femur with ventral flat comb of setae in middle, as long as femur diameter; cercus semilunular, rounded at apex; 3.5 mm ..... *P. atricornis*
- Fore coxa mostly black; hind basitarsus mostly yellow; fore basitarsus curved and pressed in the middle; 1<sup>st</sup> to 5<sup>th</sup> segments of fore tarsus ventrally flattened,

- yellow; mid femur with large flat ventral comb of black undulate setae, almost equal in length to femur diameter; cercus triangular, with angular apices and distal setae of equal length; 4.5 mm ..... *P. caudatus*
11. Mid femur with short anteroventral pile at extreme base ..... *P. ngarukaensis*  
– Mid femur with anteroventral pile of setulae along basal 1/2 or 2/3 ..... 12
12. Hind tibia entirely yellow; hind basitarsus yellow except apex; cercus subtriangular, angular ventrally, with long thin basodorsal process having short undulate hairs at apex; 4.75-5 mm ..... *P. funditor*  
– Hind tibia blackish at apex; hind basitarsus black; cercus fabiform, rounded ventrally; 4.0-4.5 mm ..... *P. afer*
13. Lateral postocular setae white, sometimes a few lowest setae black ..... 14  
– Lower postocular setae entirely black ..... 34
14. All coxae yellow, abdomen partly yellow ..... 15  
– At least mid coxa mostly brown or black, abdomen entirely dark ..... 18
15. Thorax mostly dark-grey; 5 dorsocentral setae (female) ..... *P. umngazi*  
– Thorax mostly yellow; 6 dorsocentral setae ..... 16
16. Stylus 2 times longer than antennomeres combined, flagellate *P. barracoughi*  
– Stylus as long as antennomeres combined, simple ..... 17
17. Cercus half as long as epandrium ..... *P. michaeli*  
– Cercus nearly as long as epandrium ..... *P. jasoni*
18. Mid tibia without ventral setae ..... 19  
– Mid tibia with 1-3 ventral setae ..... 20
19. Antenna mostly black; scape partly yellow; fore basitarsus thickened; 2<sup>nd</sup> to 5<sup>th</sup> segments of fore tarsus with yellow ventral pile; last tarsomeres of mid tarsus with remarkable ventral pile; wing with brown-black spot occupying 2/3 of apical and anterior parts of wing; 4 mm ..... *P. afromaculatus*  
– Antenna mostly yellow red; postpedicel mostly brown; mid femur with remarkable row of 5-6 black ventral setae at base; wing brownish anteriorly at apex; 5 mm ..... *P. zonatus*
20. M<sub>1+2</sub> with angular flexion at 2/3 of distal part ..... 21  
– M<sub>1+2</sub> gently curved towards R<sub>4+5</sub> ..... 23
21. Antenna entirely pale orange; male cercus regularly rounded, with very short sparse black marginal setae ..... *P. solivagus*  
– Antenna entirely black; male cercus elongate-oval, densely covered with short light (at base) and dark cilia ..... *P. olejniceki*  
– Antenna with scape and pedicel orange, postpedicel mostly black ..... 22
22. Lower postoculars partly black; mid tibia with 1-2 ventral seta *P. bequaerti*  
– Lower postoculars entirely white; mid tibia with 3 antero- and 1 posteroventral setae ..... *P. nebulo*
23. M<sub>1+2</sub> with weak double curvation in its distal part, parallel to R<sub>4+5</sub> at wing apex; body size 3.5 mm and less ..... 24  
– M<sub>1+2</sub> gradually approaching to R<sub>4+5</sub>; the two veins convergent to wing apex; body larger than 4 mm ..... 27

24. Cercus as long as epandrium ..... *P. nigripalpis*  
– Cercus much shorter than epandrium ..... 25
25. Face 3 times higher than wide under antennae; face in middle narrower than height of postpedicel; cercus mostly black; epandrium highest in middle, 2 times longer than high; epandrial lobe short ..... *P. machakos*  
– Face usually 2 times higher than wide under antennae; face in middle slightly wider than height of postpedicel; epandrial lobe very long, stick-shaped ..... 26
26. Cercus mostly black; epandrium elongate, 2 times longer than high at base; aedeagus with large dorsal bulb; smaller species (2.1 mm) ..... *P. zamotailovi*  
– Cercus mostly yellow; epandrium subtriangular, 1.5 times longer than high in middle; aedeagus simple; larger species (2.5-3.5 mm) ..... *P. micrurus*
27. Cercus subtriangular, with somewhat drawn-out ventral apex ..... 28  
– Cercus rounded or elongate-oval ..... 30
28. Hypandrium with large right lateral subapical tooth; ventral side of cercal triangle distinctly longer than dorsal side ..... *P. whittingtoni*  
– Hypandrium without tooth ..... 29
29. Ventral and dorsal sides of cercus almost equal in length . *P. neocongoensis*  
– Ventral side of cercus at least 2 times longer than dorsal ..... *P. naglisi*
30. Cercus rounded, nearly as large as epandrium; face parallel-sided, 2 times wider than height of postpedicel ..... *P. reavelli*  
– Cercus much smaller than epandrium; face slightly narrowing downward; face in middle slightly wider than postpedicel ..... 31
31. Cercus narrow, black, 2.3-3 times longer than wide; hind coxa black; 4 mm ..... 32  
– Cercus at most 1.5 times longer than wide ..... 33
32. Cercus with yellow inner cilia and rounded apex ..... *P. vilkamaai*  
– Cercus with black inner cilia and acute apex ..... *P. julius*
33. Cercus with yellow cilia not longer than width of cercus; tibiae entirely yellow ..... *P. ambiguus*  
– Cercus with brown-black marginal cilia, longer than width of cercus; fore femur brownish dorsally at apex; mid and hind femora brownish dorsally along entire length; fore tibia brownish; mid tibia brown except basal 1/3; hind tibia brownish in basal half and black in distal half ..... *P. congoensis*
34. Lower calypter with yellow cilia; all coxae black; mid and hind femora with 1 subapical seta; *m-cu* longer than distal part of CuA<sub>1</sub>; 4 mm (female).....  
..... *P. capensis*  
– Lower calypter with black cilia ..... 35
35. R<sub>4+5</sub> and M<sub>1+2</sub> straight and parallel to each other in apical half of wing .... 36  
– M<sub>1+2</sub> curved in apical part towards anterior wing margin ..... 42
36. Mid tarsus simple in males ..... 37  
– At least some segments of mid tarsus flattened and white ..... 39
37. Acrostichal setae multiseriata ..... *P. echinatus*  
– Acrostichals biseriata ..... 38
38. Frons and face shining violet; body black-violet ..... *P. fernandopoensis*

- Frons and face black, densely grey-whitish pollinose; body mostly yellow-brown ..... *P. mottusi*
- 39. Mid tarsus entirely white ..... 40
- At least two last segments of mid tarsus partly or entirely black ..... 41
- 40. 1<sup>st</sup>-2<sup>nd</sup> segments of mid tarsus strongly widened, at least 2 times wider than next segment ..... *P. irinae*
- 1<sup>st</sup>-2<sup>nd</sup> segments of mid tarsus not wider than next segment ..... *P. martius*
- 41. 1<sup>st</sup>-3<sup>rd</sup> segments of mid tarsus white, 4<sup>th</sup>-5<sup>th</sup> black ..... *P. pontifex*
- Mid basitarsus yellow, black at apex; 2<sup>nd</sup>-4<sup>th</sup> segments mostly white, each black in distal 1/3; 5<sup>th</sup> black ..... *P. umbricola*
- 42. Hind femur mostly black ..... 43
- All femora yellow, sometimes hind femora blackish dorsally at apex ..... 45
- 43. Hind tibia with 1 strong ventral seta ..... *P. micrurus*
- Hind tibia without strong ventral setae ..... 44
- 44. Acrostichals biseriate; mid tibia with 1 ventral seta ..... *P. diversipes*
- Acrostichals arranged in 4 rows; mid tibia usually having 3 ventral setae ..... *P. diversifemur*
- 45. Mid femur with 1 anterior subapical seta ..... 46
- Mid femur with 2 or more anterior subapical setae ..... 56
- 46. Antenna entirely black; some segments of male fore tarsus often modified or ornamented with ventral pale pile ..... 47
- Antenna mostly yellow-brownish; male fore tarsus simple ..... 52
- 47. Some segments of male fore tarsus widened or flattened ..... 48
- Male fore tarsus simple ..... 50
- 48. Fore basitarsus thickened in basal 2/3; hind tarsus black; all femora blackish dorsally; mid femur with ventral flat comb of setae in middle, as long as femur diameter; cercus semilunular, rounded at apex; 3.5 mm ..... *P. atricornis*
- Another combination of attributes ..... 49
- 49. Male cercus bearing short dark cilia, half as long as cercus width *P. maranguensis*
- Male cercus bearing long light cilia, longer than cercus width ..... *P. kabasha*
- 50. M<sub>1+2</sub> with angular curvation; femora and tarsi yellow; cercus triangular, with pointed apex ..... *P. didyensis*
- M<sub>1+2</sub> with more or less strong but gentle curvation ..... 51
- 51. Hind femur with large black dorsal spot; hypopygium smaller than 5<sup>th</sup> segment of abdomen; M<sub>1+2</sub> with strong flexion, subparallel to R<sub>4+5</sub> at apex, reaching costa before wing apex; 4.5 mm ..... *P. microproctus*
- Hind femur brownish dorsally at distal apex; epandrium as long as 3<sup>rd</sup>-5<sup>th</sup> tergites combined; M<sub>1+2</sub> with inconspicuous flexion, reaching costa at wing apex ..... *P. bissindza*
- 52. M<sub>1+2</sub> with strong or angular curvation forming apical cross-vein ..... 53
- M<sub>1+2</sub> gently curved at middle of distal part ..... 54
- 53. M<sub>1+2</sub> with angular curvation (female) ..... *P. gracilis*
- M<sub>1+2</sub> with strong but gentle curvation ..... *P. emasculatus*

- 54. Face narrow, 3 times higher than wide under antennae; male mid femur with posteroventral row of long hairs, nearly as long as diameter of femur ..... *P. bissindza*
- Face 2-2.5 times higher than wide under antennae; male mid femur with 1 anteroventral and 1 posteroventral elongate subapical cilia, without rows of long hairs ..... 55
- 55. Cercus mostly black; epandrium elongate, 2 times longer than high at base; aedeagus with large dorsal bulb; smaller species (2.1 mm) ..... *P. zamotailovi*
- Cercus mostly yellow; epandrium subtriangular, 1.5 times longer than high in middle; aedeagus simple; larger species (2.5-3.5 mm) ..... *P. micrurus*
- 56. Antenna entirely black ..... 57
- Antenna mostly yellow-brownish ..... 62
- 57. Hind tarsus entirely black; wing blackish along longitudinal veins and at *m-cu*; cercus small, blackish ..... *P. obscoenus*
- Hind basitarsus mostly yellow; wing evenly greyish, brownish along costa ..... 58
- 58. Fore tarsus simple ..... 59
- Some segments of fore tarsus widened and flattened ..... 60
- 59. Postpedicel as long as high; hypopygium nearly as long as abdomen, cercus rounded-oval, as large as epandrium ..... *P. sanjensis*
- Postpedicel 2.2 times as long as high; hypopygium smaller, as long as 4<sup>th</sup>-5<sup>th</sup> tergites combined; cercus smaller than epandrium, with distinct distal apex ..... *P. zogualensis*
- 60. 4-5<sup>th</sup> segments of fore tarsus slightly widened and flattened; 3<sup>rd</sup> segment thickened at apex or slightly widened and flattened ..... *P. brincki*
- 3<sup>rd</sup>-5<sup>th</sup> segments of fore tarsus strongly widened and flattened ..... 61
- 61. Male cercus bearing short dark cilia, half as long as cercus width ..... *P. maranguensis*
- Male cercus bearing long light cilia, as long as cercus width ..... *P. kabasha*
- 62. Mid tibia with 4-5 ventral setae ..... 63
- Mid tibia with 2 ventral setae ..... 64
- 63. Male and female mid femur with anterior comb of 5-6 strong setae in apical half; lower calypter with flattened setae ..... *P. pectinifer*
- Mid femur with 2-4 weak setae in addition to 1 strong subapical seta; lower calypter with simple setae (female) ..... *P. schoutedeni*
- 64. Fore tibia with a long apicoventral cilia, half as long as basitarsus; apical curved part of M<sub>1+2</sub> approximately as long as middle part (from *m-cu* to curvation) ..... 65
- Fore tibia with very short apicoventral seta; apical curved part of M<sub>1+2</sub> approximately half as long as middle part; cercus with simple setae ..... 72
- 65. Cercus in distal part with inner row of distinctly widened and flattened setae ..... 66
- Cercus with both inner and outer rows of simple or hairlike setae ..... 68
- 66. Cercus nearly 2 times longer than wide, with large and thick trilobate inner

- middorsal process bearing flattened setae on apex of each lobe ..... *P. bretoni*  
 – Cercus barely longer than wide, with simple clavate inner process ..... 67  
 67. Cercus with hooked setae in outer row; inner process of cercus located at basal 1/3, short, at most half as long as cercus width ..... *P. ineditus*  
 – Cercus with straight setae in outer row; inner process of cercus located in distal 1/3, nearly as long as cercus width ..... *P. lippensi*  
 68. Cercus simple, with simple setae, without inner process ..... 69  
 – Cercus bearing hooked setae in inner row and short but distinct inner process before middle or at middle of dorsal side ..... 70  
 69. Postpedicel 1.4 times longer than high; cercus at least 1.5 times longer than wide, with acute apex and almost even margins ..... *P. aeptus*  
 – Postpedicel as long as high; cercus rounded, deeply incised along distal and ventral margins ..... *P. dobronosovi*  
 70. Cercus shorter than half-length of epandrium, barely longer than wide, with short inner middorsal process in shape of boomerang ..... *P. gabonensis*  
 – Cercus at least 2/3 length of epandrium ..... 71  
 71. Cercus elongate-oval, 2 times longer than wide, with thin stick-shaped inner process at basal 1/3 ..... *P. leidenrothi*  
 – Cercus 2.5-3.0 times longer than wide, abruptly narrowed in distal half, with broad foldlike inner middorsal lobe ..... *P. donscoffi*  
 72. Posterior wing margin somewhat projecting at apex of CuA<sub>1</sub>, so it seems to be straight or slightly concave between An and CuA<sub>1</sub> and between CuA<sub>1</sub> and wing apex ..... *P. miripennis*  
 – Posterior wing margin almost evenly convex ..... 73  
 73. Cercus with inner process ..... 74  
 – Cercus simple, without process ..... 76  
 74. Cercus with short simple process at base ..... *P. kassebeeri*  
 – Cercus with short simple inner middorsal process ..... *P. basilewskyi*  
 – Cercus with bilobate inner process ..... 75  
 75. Cercus rounded, with inner basodorsal processes having two long lobes.....  
 ..... *P. abstrusus*  
 – Cercus trapezoidal, with distodorsal process having one long broad and one short thin lobes ..... *P. altimontanus*  
 76. Epandrial lobe broad, bearing a fan of about 6 long apical cilia ..... 77  
 – Epandrial lobe stick-shape, with 2-3 apical cilia ..... 78  
 77. Cercus triangular, with light hooked hairs ..... *P. collarti*  
 – Cercus long, 5 times longer than high, with long simple setae and short hooked cilia ventrally ..... *P. pedunculatus*  
 – Cercus rounded, with black simple cilia ..... *P. dedegwa*  
 78. Hypandrium having sclerotised hook-like lobe at base ..... *P. bururi*  
 – Hypandrium simple, without hook-like lobe ..... 79  
 79. Cercus bandlike, gently convex ventrally, rounded at extreme apex  
 ..... *P. nigeriensis*

- Cercus subtriangular, angular ventrally and apically ..... 80  
 80. Cercus longer than high, pointed apically ..... *P. emasculatus*  
 – Cercus higher than long, right-angular dorsoapically ..... *P. confusibilis*

### Genus *Polymedon* OSTEN SACKEN

1. Wing vein *m-cu* 1.5 times longer than distal part of CuA<sub>1</sub>; male cercus with long and narrow basoventral lobe; male stylus simple ..... *P. octavianus*  
 – Wing vein *m-cu* as long as distal part of CuA<sub>1</sub>; male cercus without basoventral lobe; male stylus with broad flag in distal 1/6 ..... 2  
 2. Wing practically hyaline, inconspicuously darkened at *m-cu* and flexion of M<sub>1+2</sub>; male antennal stylus entirely black ..... *P. mulanjensis*  
 – Wing almost entirely brownish; apical flag on stylus white in basal 1/3.....  
 ..... *P. ethiopiensis*

### Genus *Tachytrechus* HALIDAY

1. Antenna entirely black ..... 2  
 – Antenna partly yellow-brownish ..... 6  
 2. Legs entirely black, at most knees light ..... 3  
 – Legs largely light ..... 5  
 3. Female (?and male) fore femur and tibia with ventral row of very long setae: femur with 6 and tibia with 5 setae ..... *T. insolitus*  
 – Fore femur without long setae; fore tibia with at most 2 long posteroventral setae ..... 4  
 4. Male cercus rounded ..... *T. petraeus*  
 – Male cercus subtriangular ..... *T. imperator*  
 5. Femora almost entirely black; male antennal stylus with apical flag *T. amnoni*  
 – Femora yellow in distal half; male stylus simple ..... *T. bracteatus*  
 6. Fore tibia flattened and enlarged (males) ..... 7  
 – Fore tibia simple or slightly thickened at apex ..... 8  
 7. Fore tibia flattened in middle; 1<sup>st</sup> and 2<sup>nd</sup> segments of mid tarsus strongly enlarged and flattened; femora partly black ..... *T. pteropodus*  
 – Fore tibia flattened in apical third; mid tarsus simple ..... *T. elegans*  
 8. Fore basitarsus remarkably slender (males) ..... 9  
 – Fore basitarsus not remarkably slender ..... 10  
 9. Fore basitarsus as long as 2<sup>nd</sup> to 5<sup>th</sup> tarsomeres combined ..... *T. consobrinus*  
 – Fore basitarsus twice longer than 2<sup>nd</sup>-5<sup>th</sup> tarsomeres (North Africa) *T. insignis*  
 10. Costa thickened in basal section (males) ..... 11  
 – Costa simple ..... 15  
 11. Antenna entirely yellow; fore coxa yellow ..... *T. luteicoxa*  
 – Postpedicel mostly black; all coxae dark ..... 12  
 12. Male 1<sup>st</sup> to 5<sup>th</sup> segments of fore tarsus enlarged; cercus yellow, subtriangular



- ..... *T. planitarsis*  
 – Fore tarsus at most slightly thickened; cercus black, usually oval ..... 13  
 13. Legs mostly black; knees and tibiae yellow except for black distal apex of tibiae; male antennal stylus with apical flag; cercus brown-black, rounded-triangular ..... *T. amnoni*  
 – Fore femur mostly black; other femora and tibiae partly blackish; wing maculated at *m-cu* at  $M_{1+2}$  curvature; stylus simple; cercus black, subtriangular.....  
 ..... *T. kenyensis*  
 – Legs mostly yellow, at most femora black at base; stylus simple ..... 14  
 14. Femora entirely yellow; antennal scape and pedicel yellow;  $M_{1+2}$  with angular curvature ..... *T. tessellatus*  
 – Femora black at base; pedicel black, only scape mostly yellow;  $M_{1+2}$  straight  
 ..... *T. brittoni*  
 15. Fore coxa yellow; mid and hind coxae mostly brown; legs yellow; lower postocular setae white; hind femur thick (female) ..... *T. luteicoxa*  
 – All coxae black ..... 16  
 16. Antenna entirely yellow ..... *T. melanolepis*  
 – Postpedicel black ..... 17  
 17. Proepisternum with black setae and hairs ..... 18  
 – Proepisternum with yellow hairs and black seta;  $M_{1+2}$  with angular curvature in apical part (females) ..... 22  
 18.  $M_{1+2}$  with angular curvature in apical part (female) ..... *T. pteropodus*  
 –  $M_{1+2}$  almost straight in apical part, gently curved towards  $R_{4+5}$  ..... 19  
 19. Femora mostly yellow ..... 20  
 – At least fore femur mostly black (females) ..... 21  
 20. Femora entirely yellow; hind tibia black at apex; scape and pedicel yellow..  
 ..... *T. alternatus*  
 – Fore femur black in basal fourth; mid and hind femora black at extreme base; hind tibia entirely yellow; scape mostly yellow, pedicel black (female) *T. brittoni*  
 21. Fore femur mostly black; mid and hind femora black ventrally in basal half and dorsally at extreme apex; all tibia partly blackish..... *T. kenyensis*  
 – Legs mostly black; knees and tibiae yellow except for black distal apex of tibiae ..... *T. amnoni*  
 22. Mid tibia with 3 antero- and 3 posteroventral setae ..... *T. tessellatus*  
 – Mid tibia with 2 ventral setae ..... *T. planitarsis*

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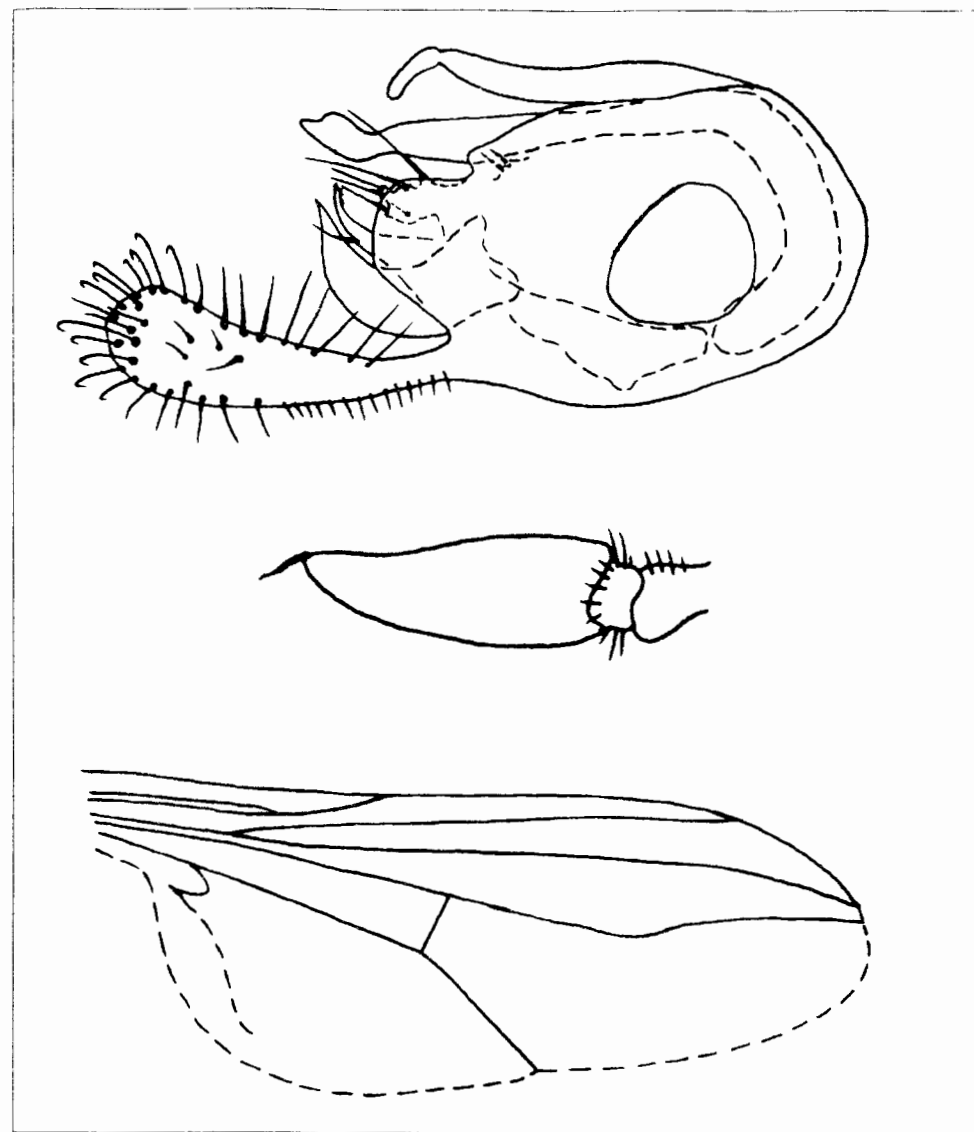
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Figs.1-3. *Argyrochlamys angolensis* GRICHANOV, **spec. nov.**

1. Hypopygium.
2. Antenna.
3. Wing.

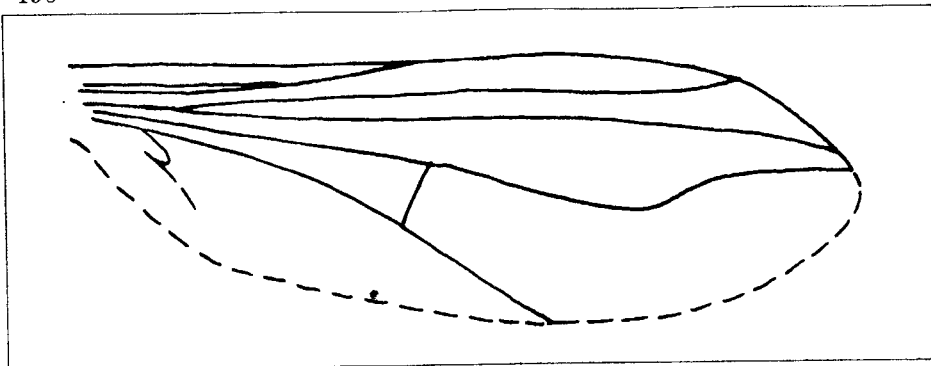
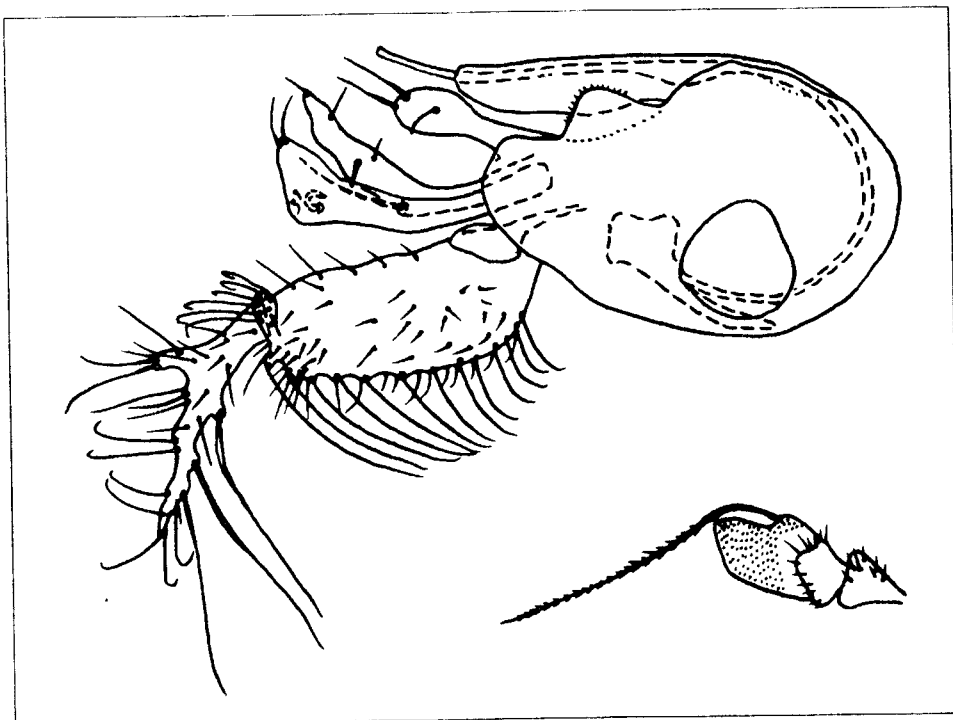


Fig.4. *Argyrochlamys erythraeus* GRICHANOV, **spec. nov.**

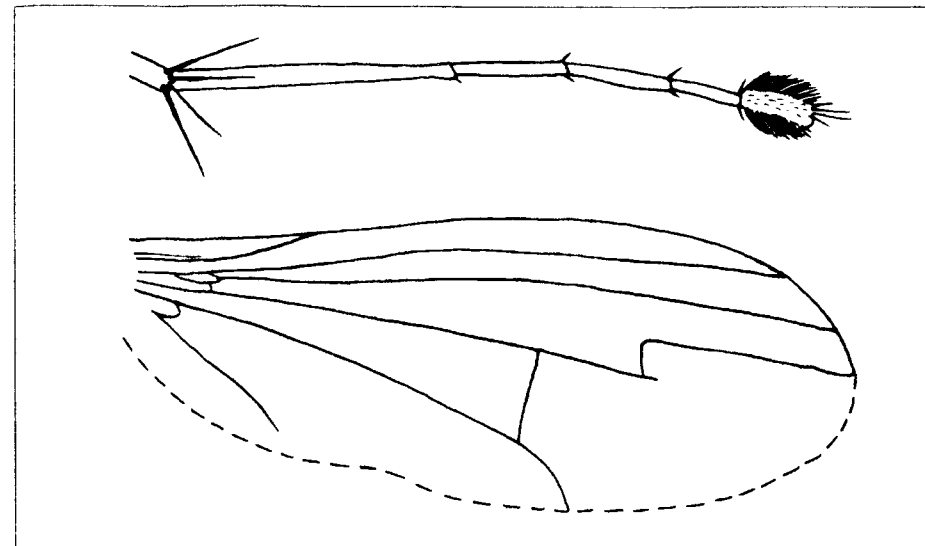
4. Wing.



Figs.5-8. *Dolichopus afroungulatus* GRICHANOV, **spec. nov.**

5. Hypopygium.

6. Antenna.



Figs.5-8. *Dolichopus afroungulatus* GRICHANOV, **spec. nov.**

7. Mid tarsus.

8. Wing.

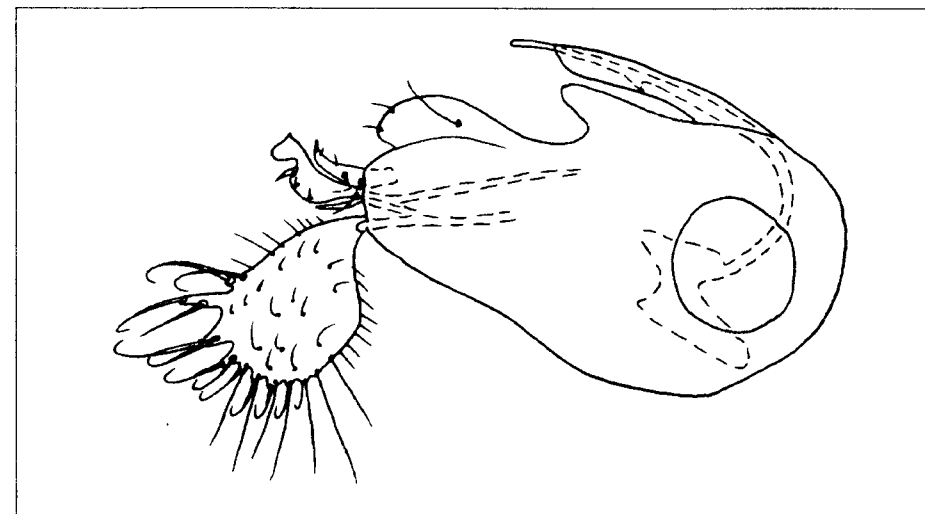
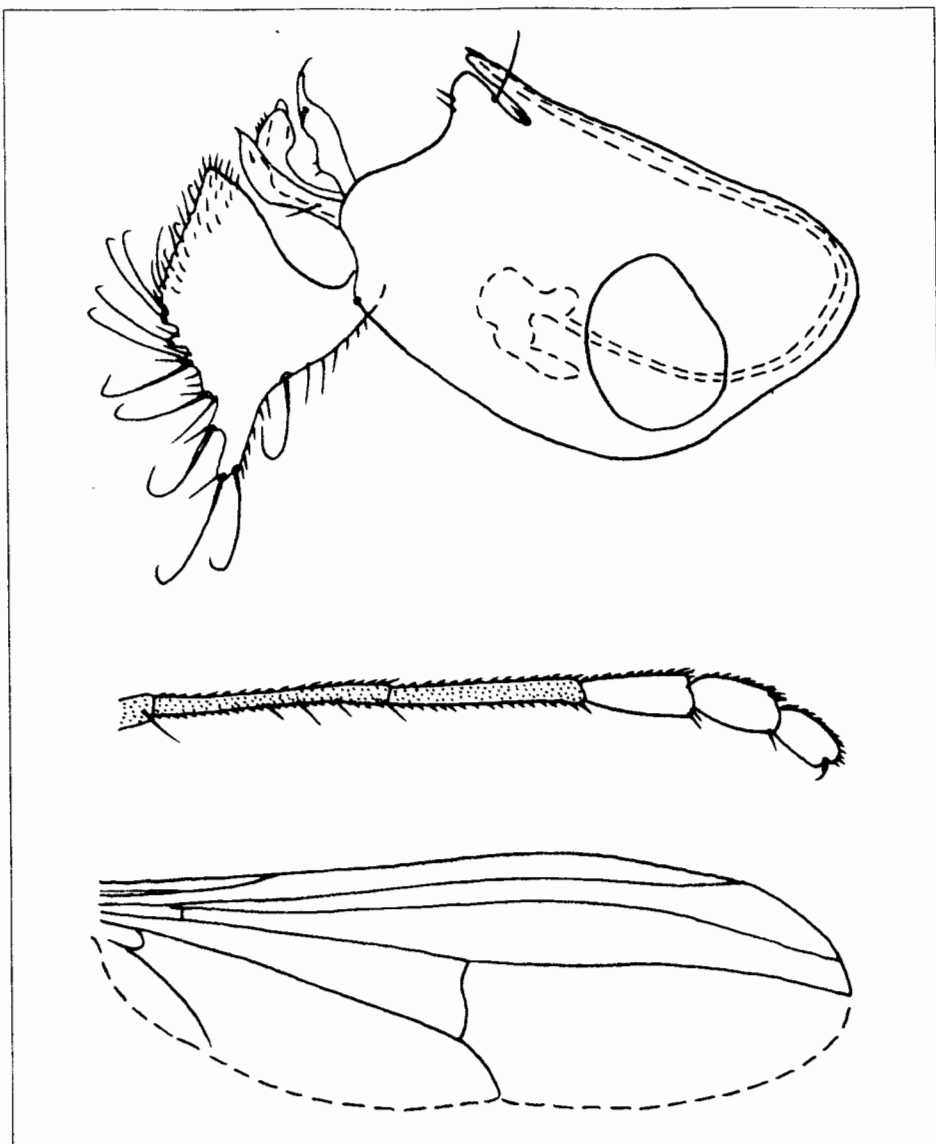


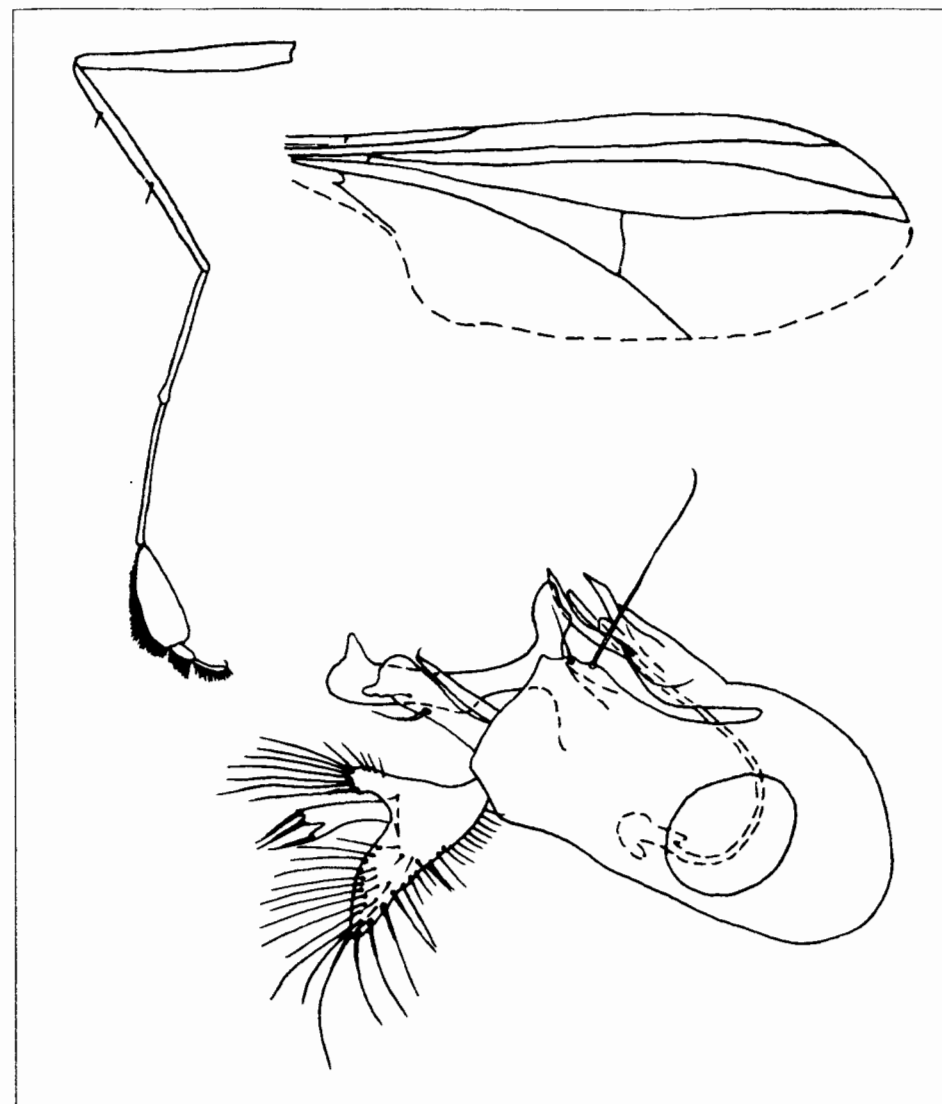
Fig.9. *Dolichopus flavocrinitus* BECKER.

9. Hypopygium.



Figs.10-12. *Hercostomus afer* RONDANI.

- 10. Hypopygium.
- 11. Hind leg.
- 12. Wing.



Figs.13-15. *Hercostomus balensis* GRICHANOV, spec. nov.

- 13. Hypopygium.
- 14. Fore leg.
- 15. Wing.

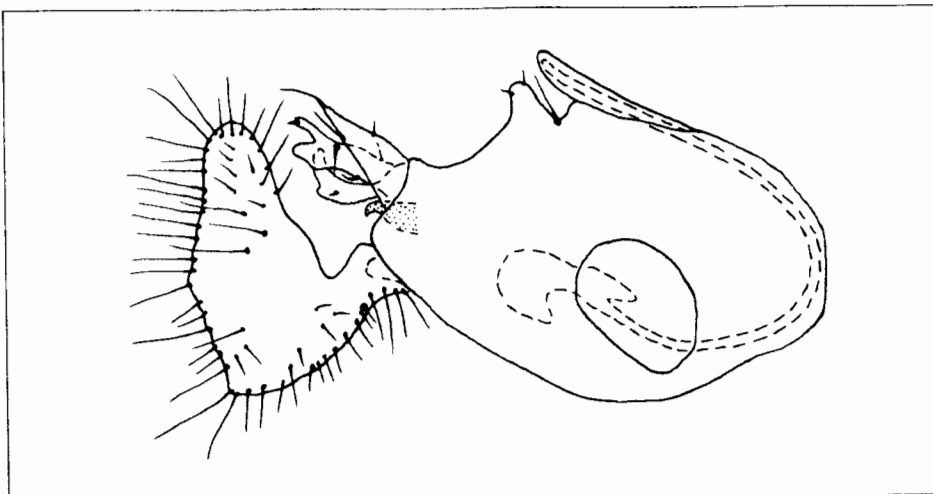
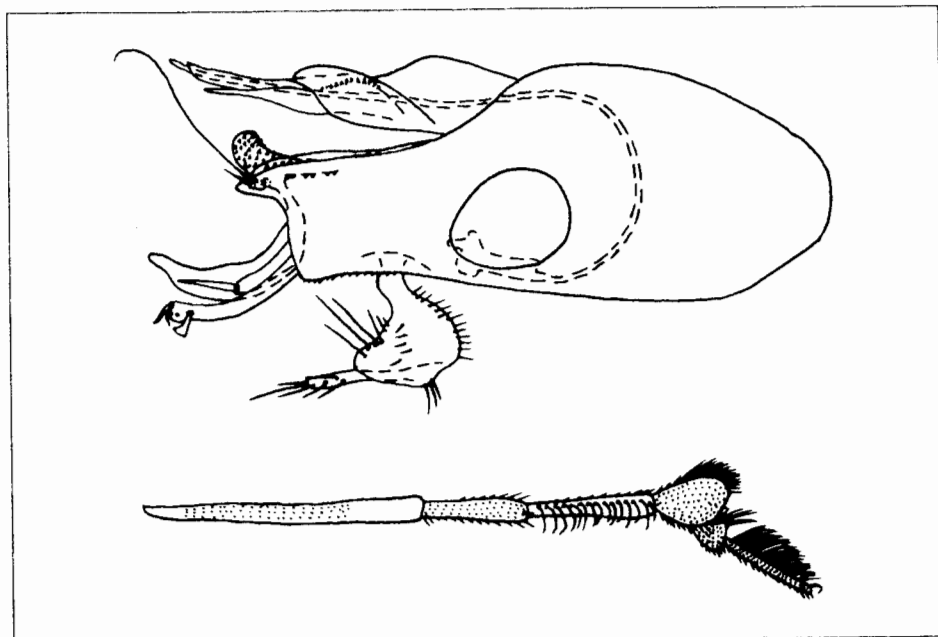
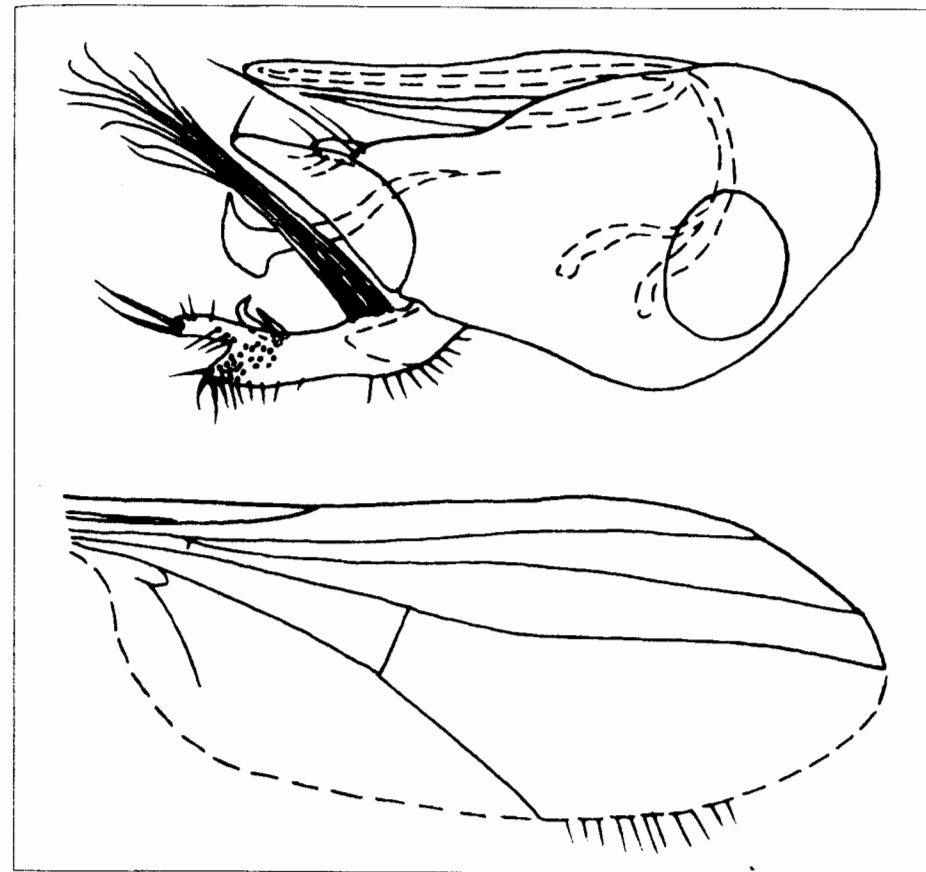


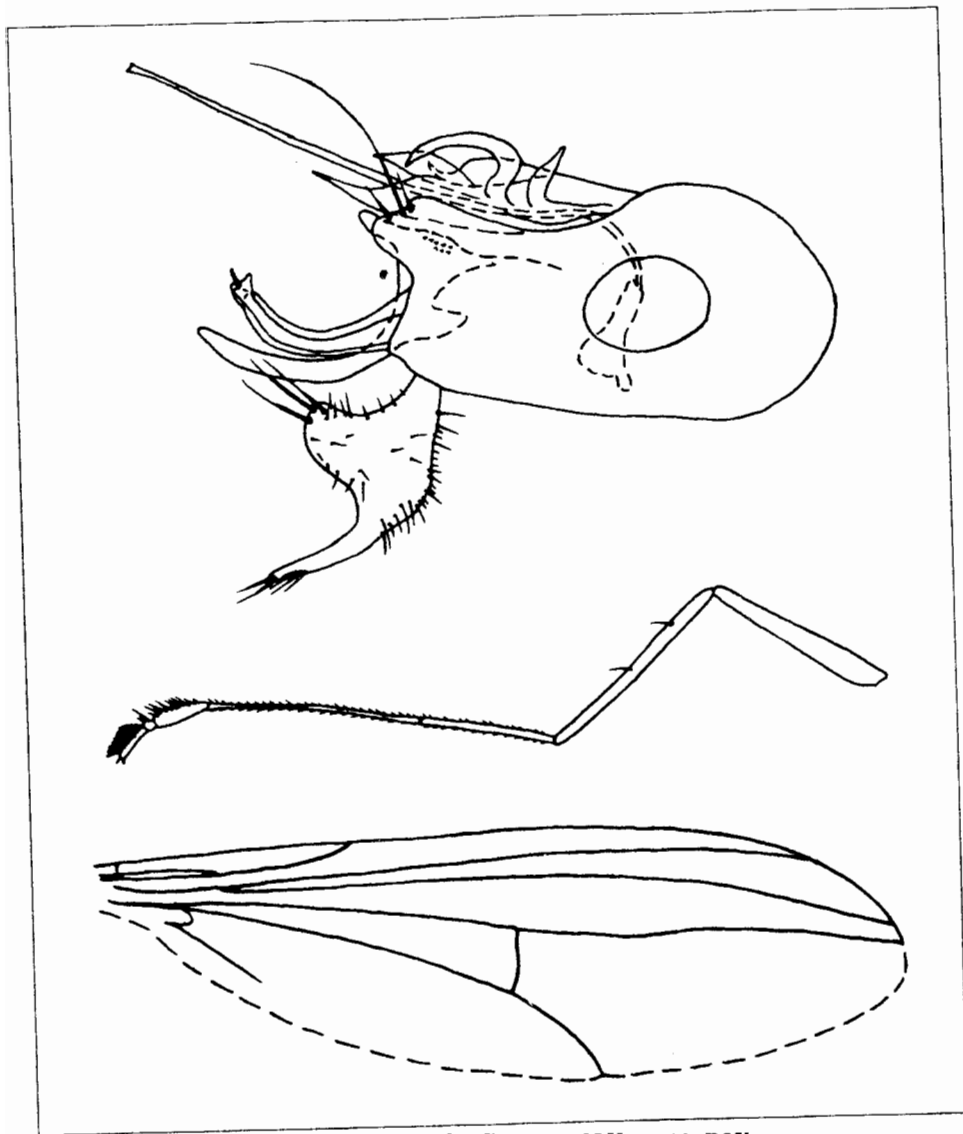
Fig.16. *Hercostomus caprivi* GRICHANOV, **spec. nov.**  
16. Hypopygium.



Figs.17-18. *Hercostomus freidbergi* GRICHANOV, **spec. nov.**  
17. Hypopygium.  
18. Fore tibia and tarsus.

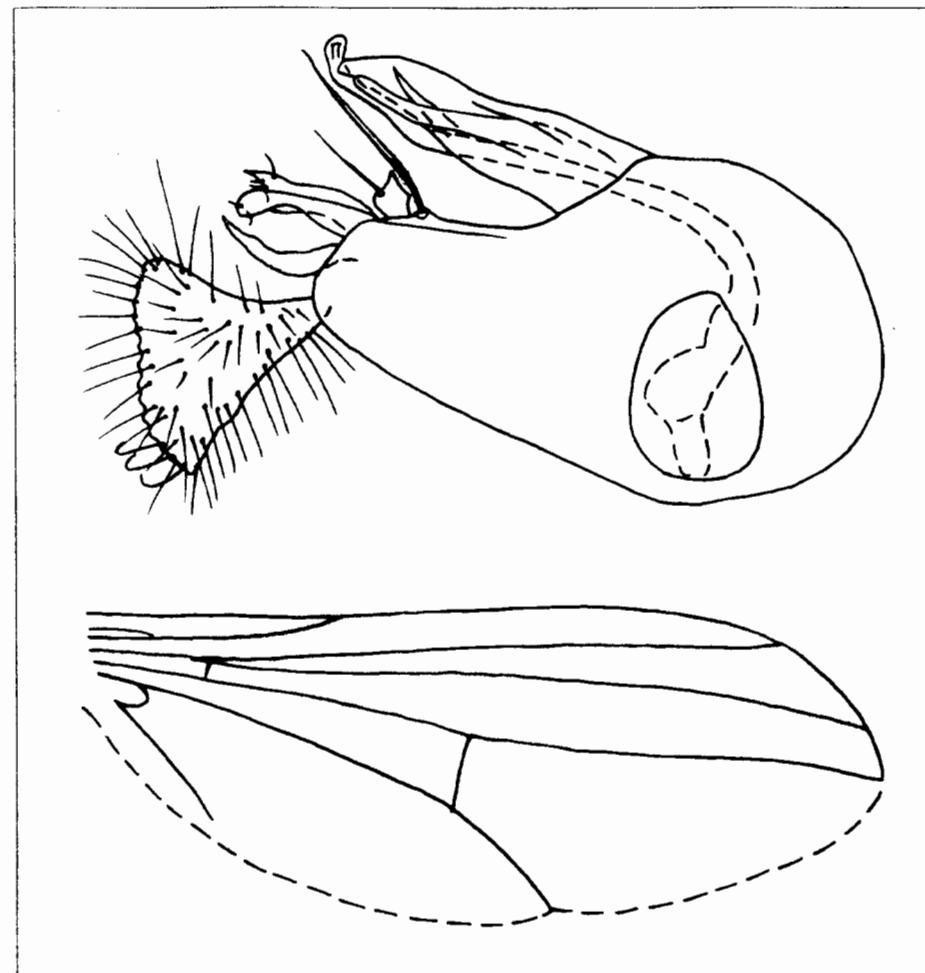


Figs.19-20. *Hercostomus garambensis* GRICHANOV, **spec. nov.**  
19. Hypopygium.  
20. Wing.



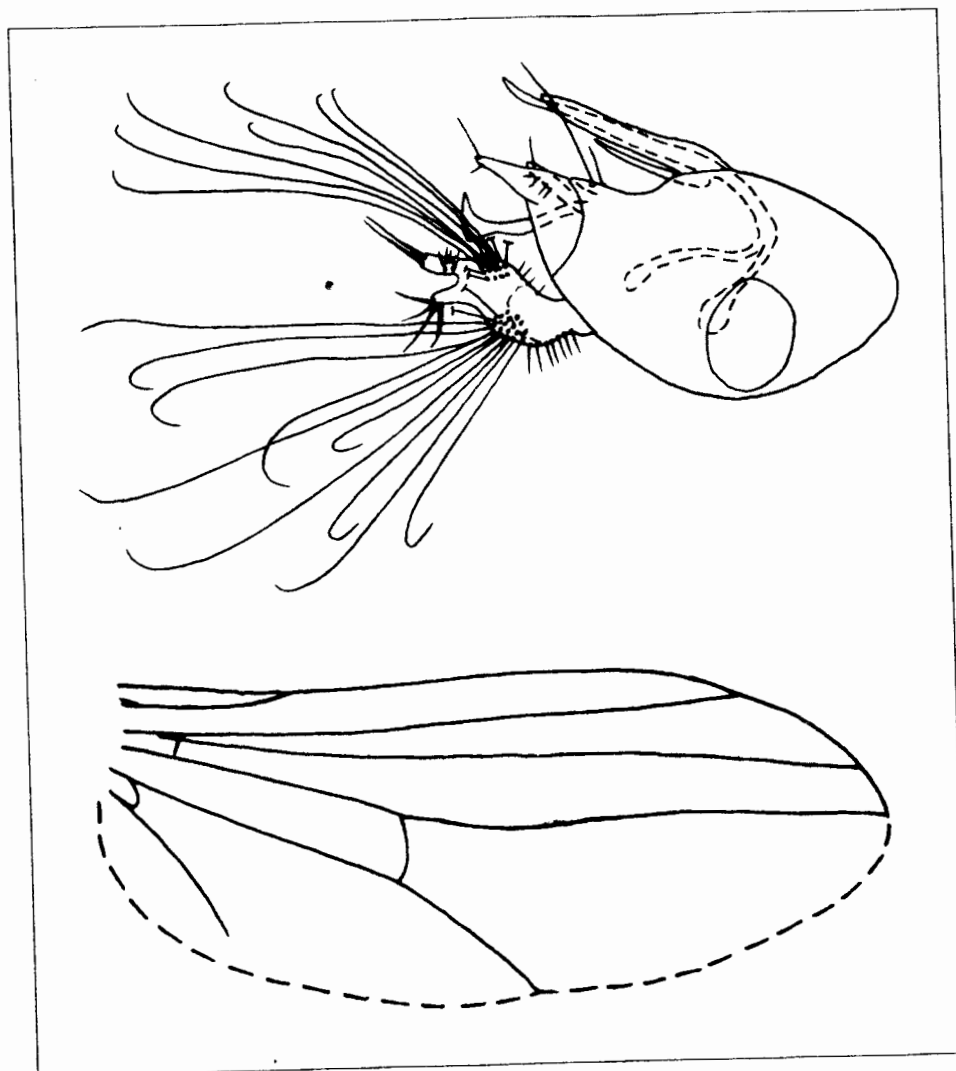
Figs. 21-23. *Hercostomus heinrichi* GRICHANOV, spec. nov.

- 21. Hypopygium.
- 22. Fore leg.
- 23. Wing.

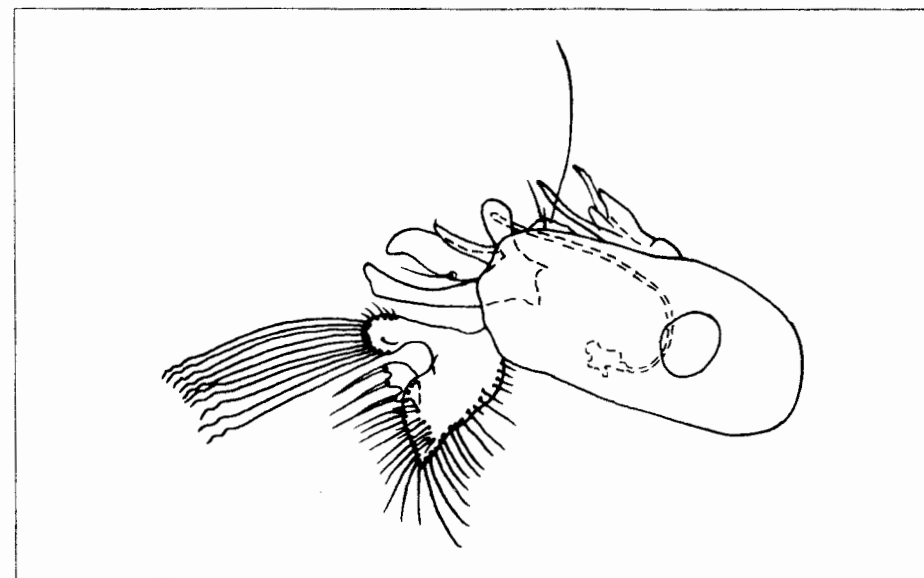


Figs. 24-25. *Hercostomus intercedens* GRICHANOV, spec. nov.

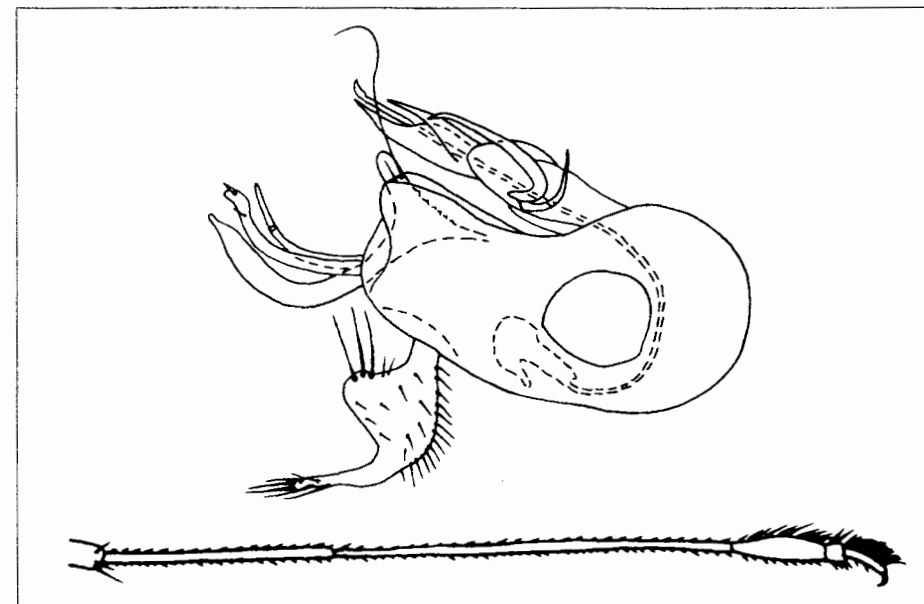
- 24. Hypopygium.
- 25. Wing.



Figs. 26-27. *Hercostomus itineris* GRICHANOV, **spec. nov.**  
 26. Hypopygium.  
 27. Wing.



Figs. 28. *Hercostomus kefaensis* GRICHANOV, **spec. nov.**  
 28. Hypopygium.



Figs. 29-30. *Hercostomus ngozi* GRICHANOV, **spec. nov.**  
 29. Hypopygium.  
 30. Fore tarsus.



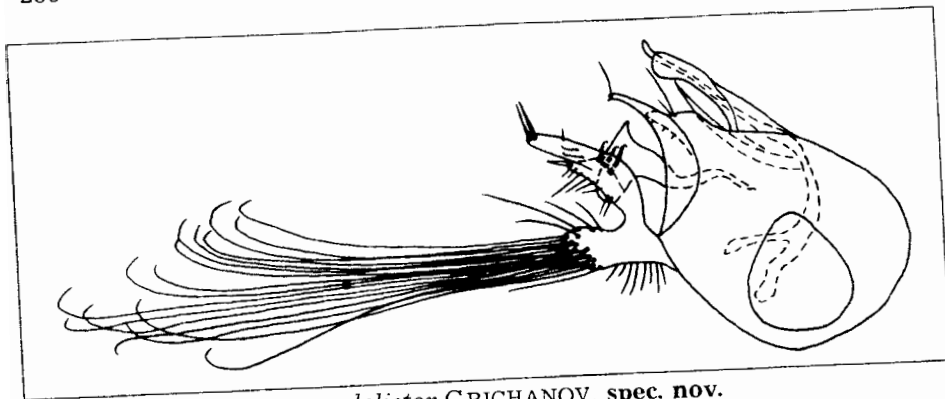


Fig.31. *Hercostomus pseudolictor* GRICHANOV, spec. nov.  
31. Hypopygium.

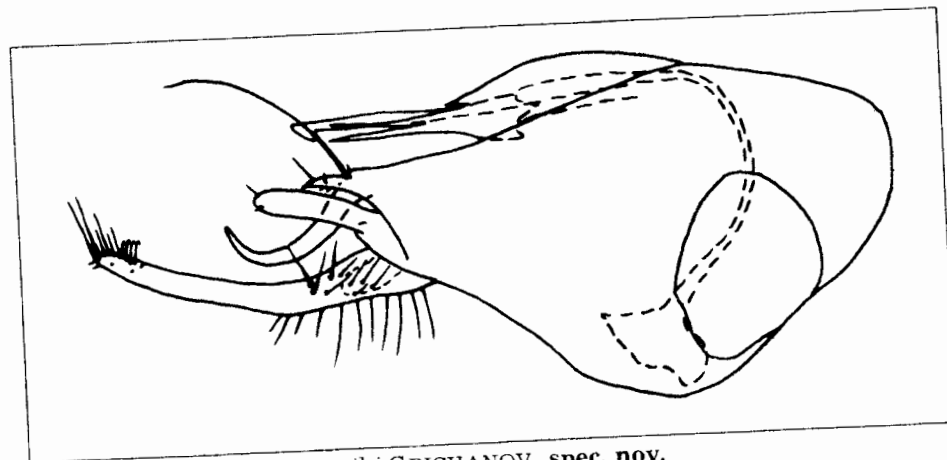
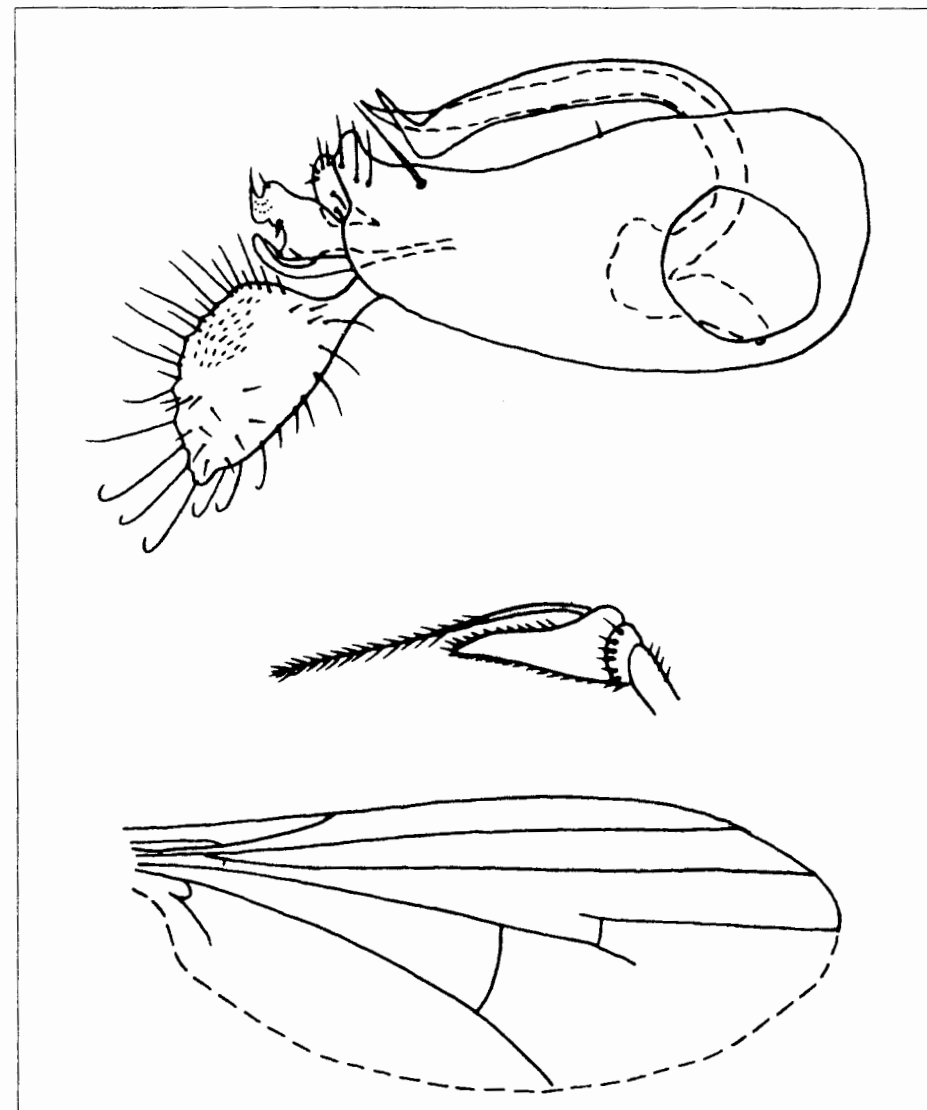


Fig.32. *Hercostomus rezniki* GRICHANOV, spec. nov.  
32. Hypopygium.



Figs.33-35. *Lichtwardtia angulicornis* GRICHANOV, spec. nov.  
33. Hypopygium.  
34. Antenna.  
35. Wing.

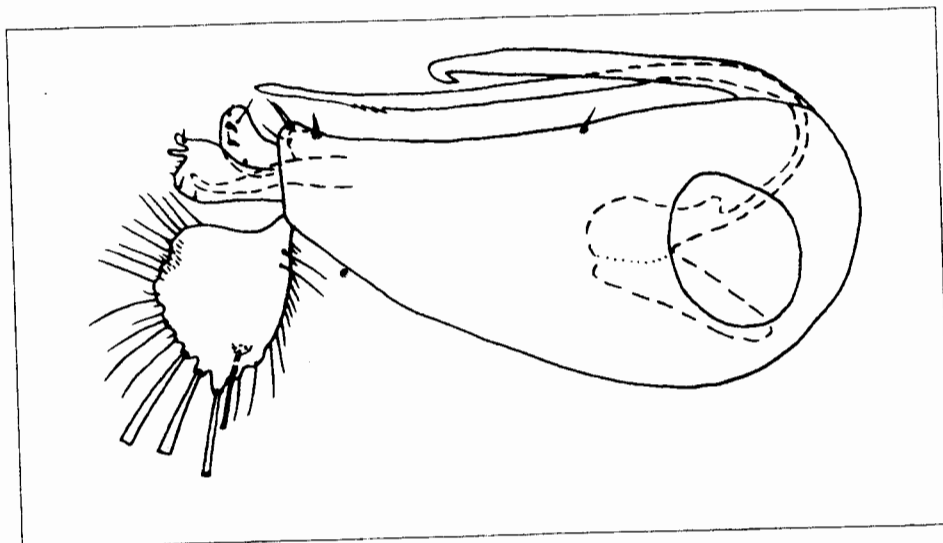


Fig.36. *Lichtwardtia clypeata* GRICHANOV, **spec. nov.**  
36. Hypopygium.

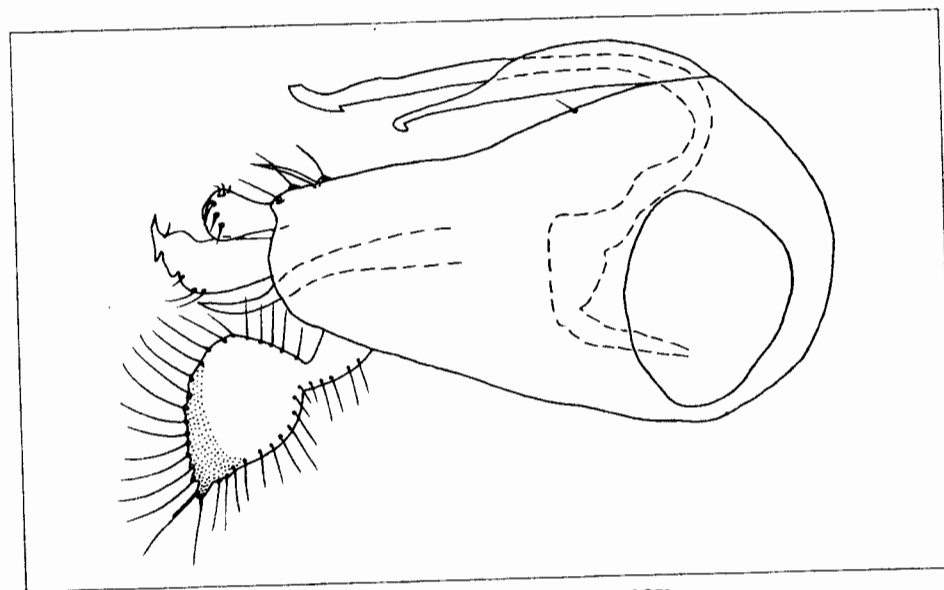


Fig.37. *Lichtwardtia hilgerae* GRICHANOV, **spec. nov.**  
37. Hypopygium.

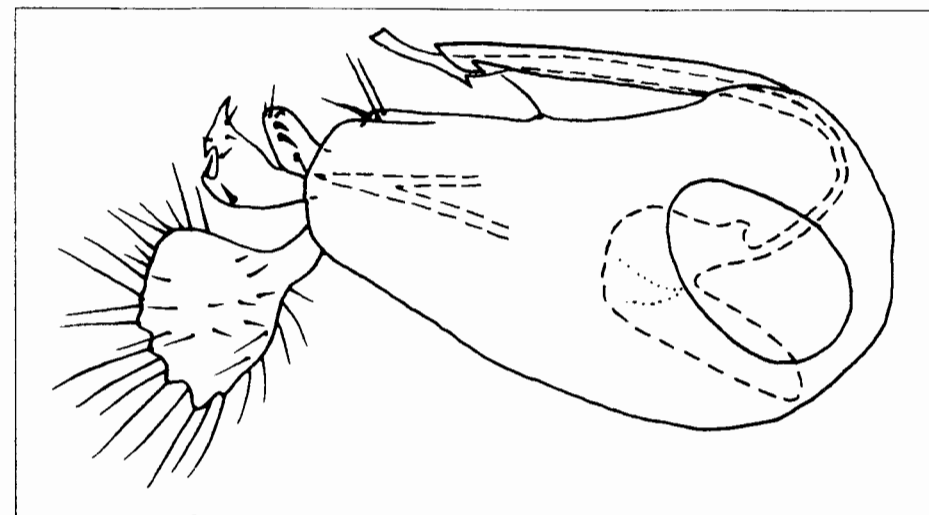


Fig.38. *Lichtwardtia maculata* PARENT.  
38. Hypopygium.

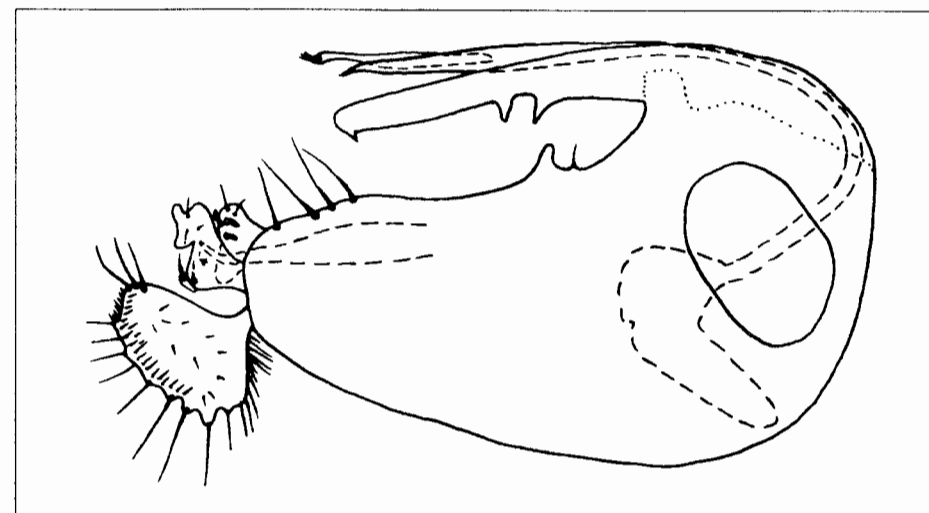
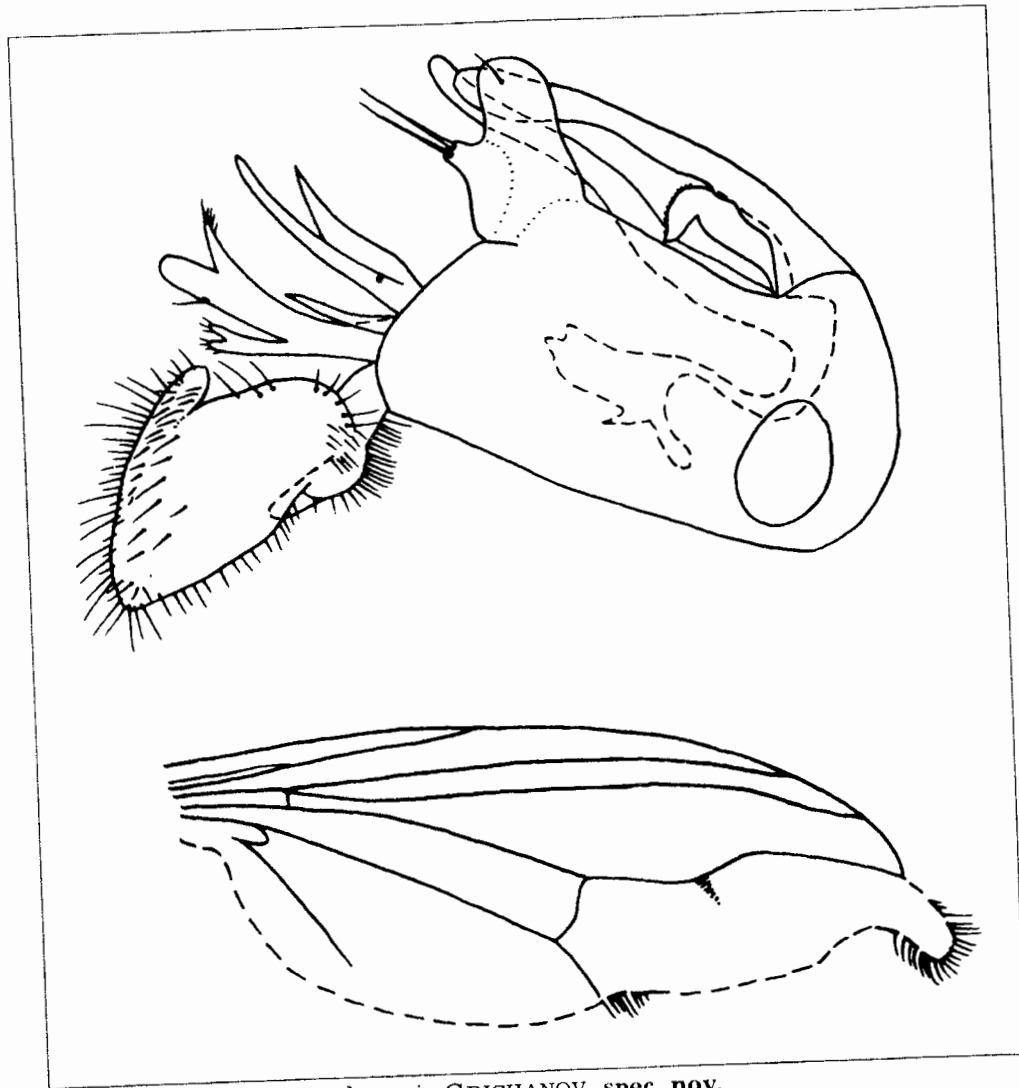
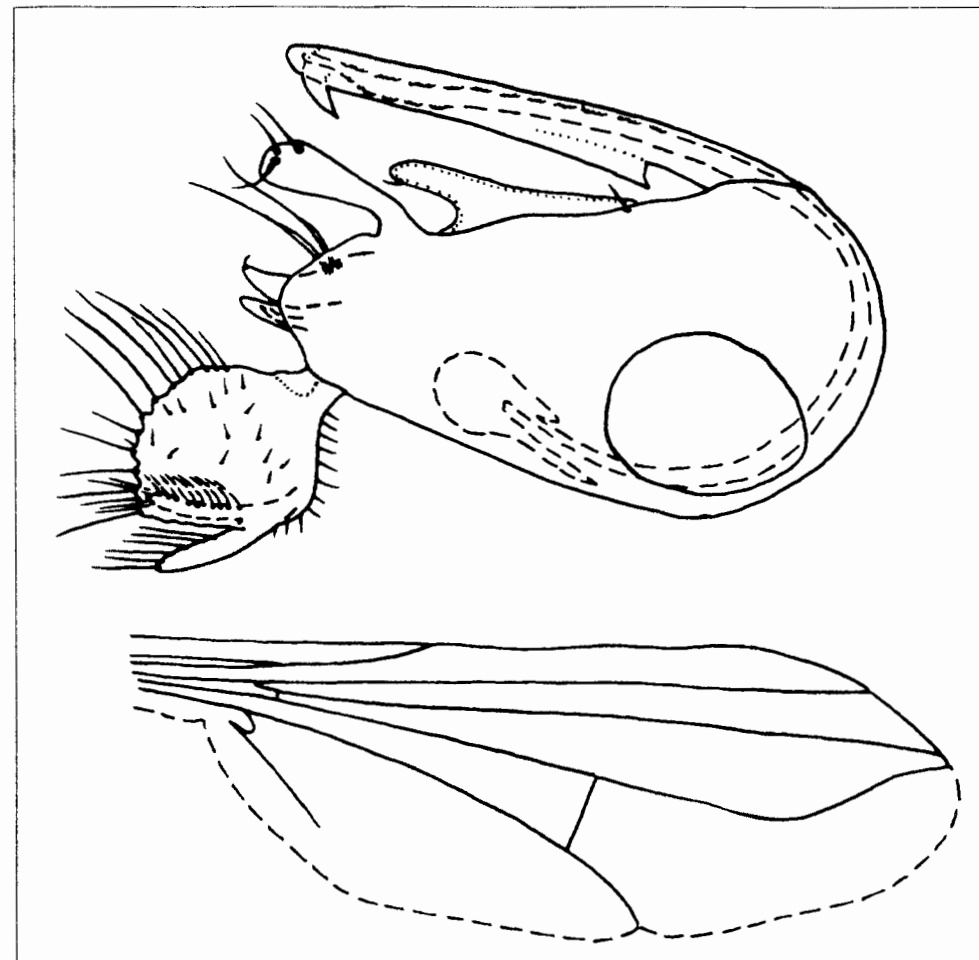


Fig.39. *Lichtwardtia nigrifacies* GRICHANOV, **spec. nov.**  
39. Hypopygium.



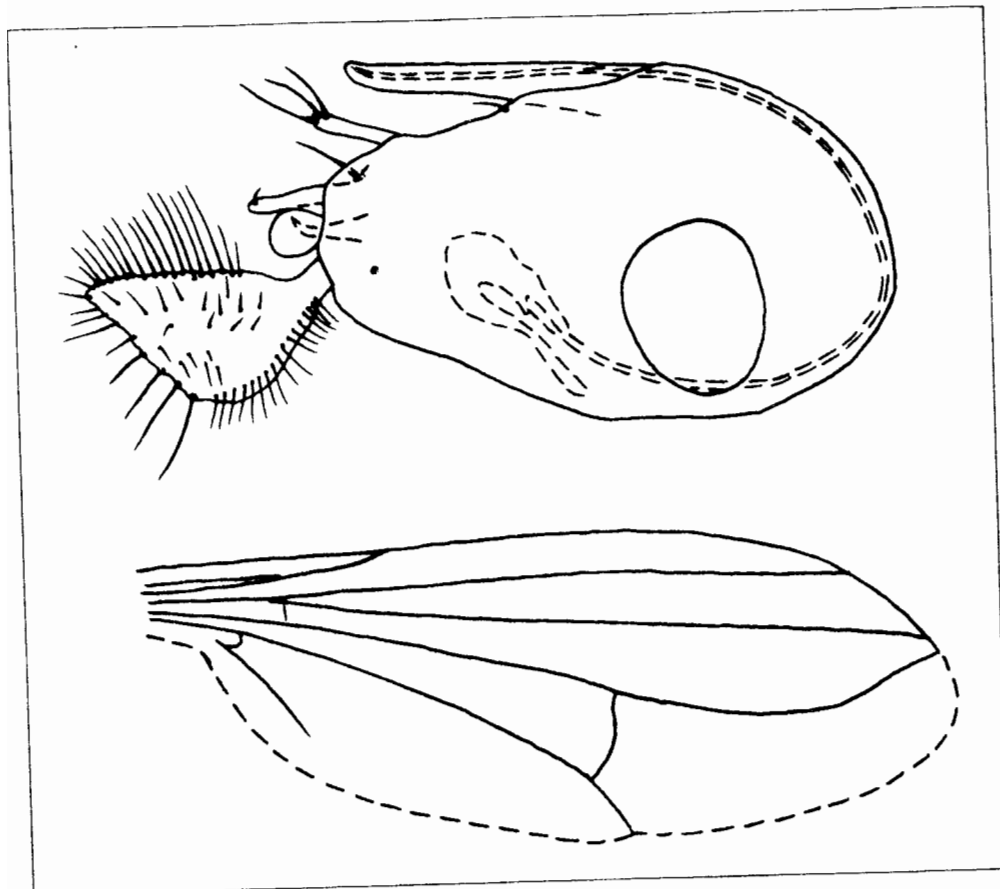
Figs.40-41. *Ludovicius bogoria* GRICHANOV, spec. nov.

- 40. Hypopygium.
- 41. Wing.



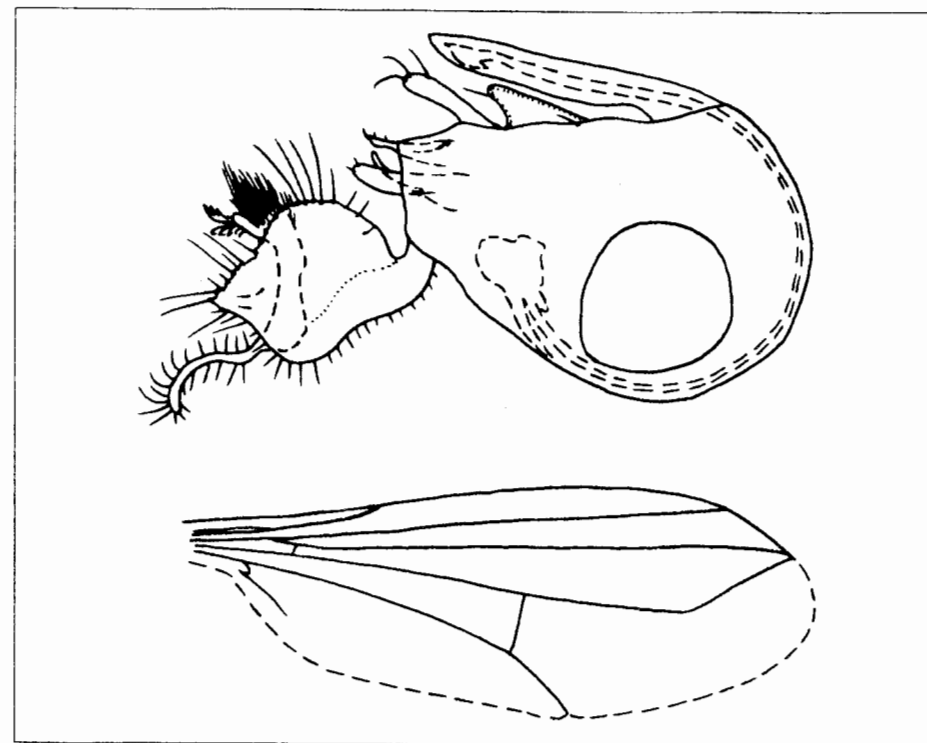
Figs.42-43. *Paracleius abstrusus* GRICHANOV, spec. nov.

- 42. Hypopygium.
- 43. Wing.



Figs.44-45. *Paracleius aseptus* GRICHANOV, **spec. nov.**

44. Hypopygium.  
45. Wing.



Figs.46-47. *Paracleius altimontanus* GRICHANOV, **spec. nov.**

46. Hypopygium.  
47. Wing.

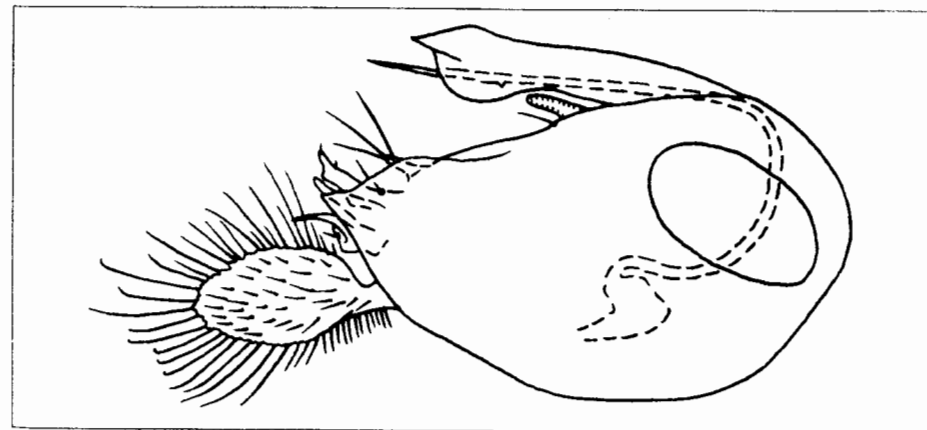
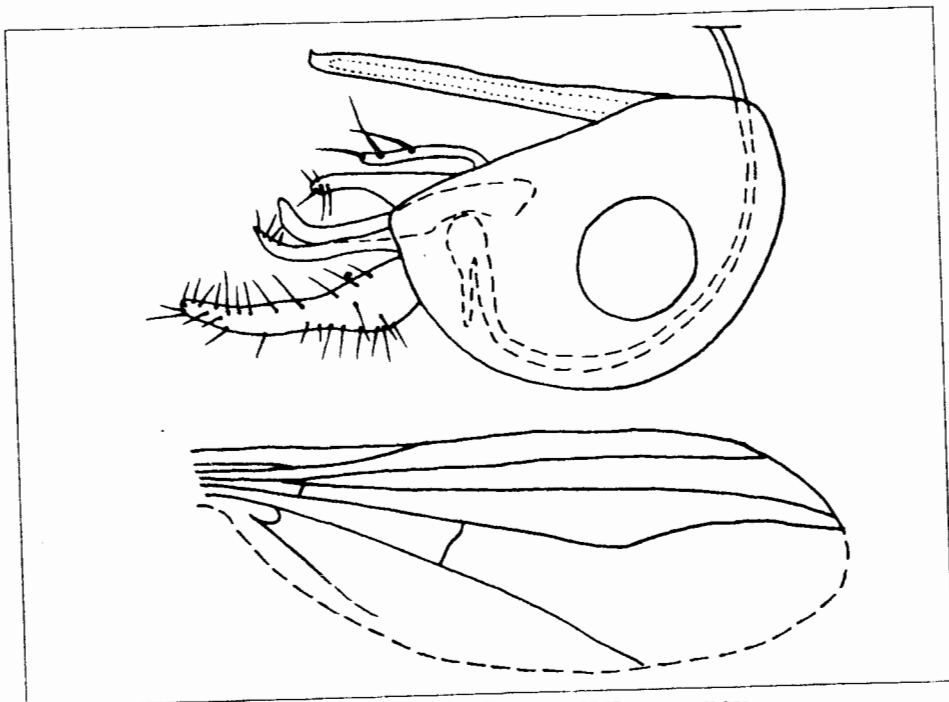


Fig.48. *Paracleius ambiguus* (PARENT).

48. Hypopygium.



Figs. 49-50. *Paracleius barraclooughi* GRICHANOV, spec. nov.  
49. Hypopygium.  
50. Wing.

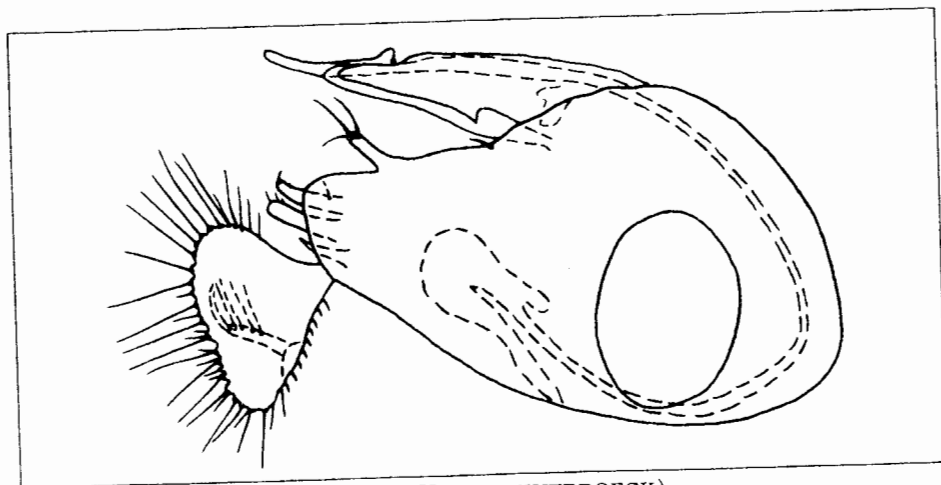


Fig. 51. *Paracleius basilewskyi* (VANSCHUYTBROECK).  
51. Hypopygium.

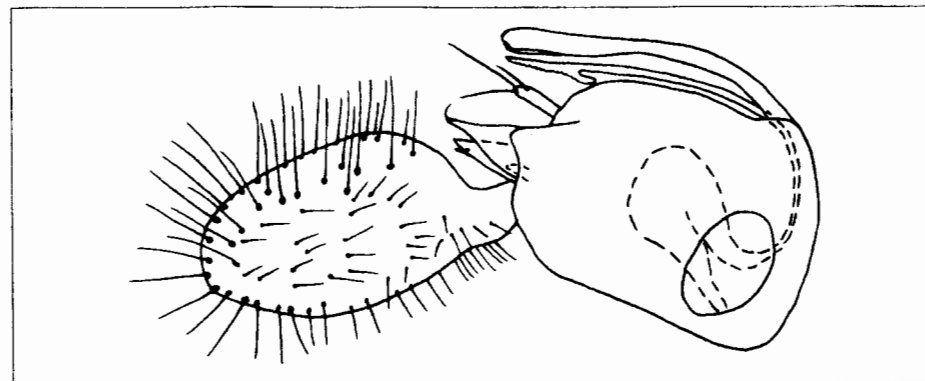


Fig. 52. *Paracleius biadimbi* GRICHANOV, spec. nov.  
52. Hypopygium.

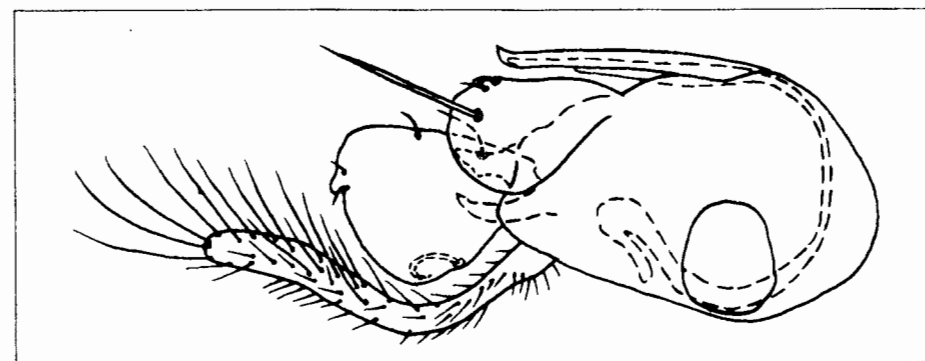


Fig. 53. *Paracleius bissindza* GRICHANOV, spec. nov.  
53. Hypopygium.

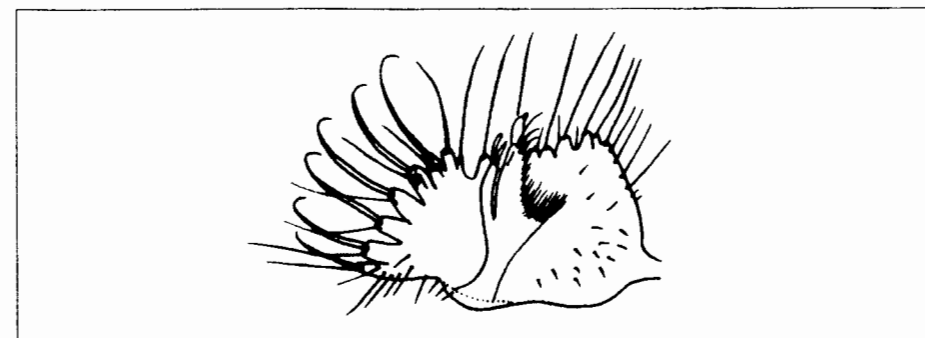


Fig. 54. *Paracleius bretoni* GRICHANOV, spec. nov.  
54. Cercus (inner view).

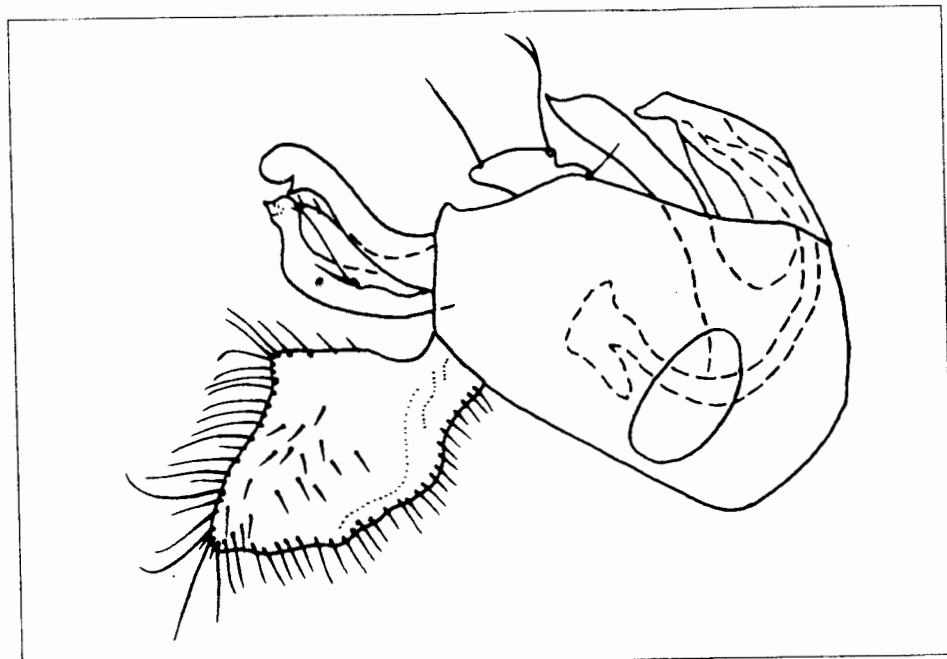


Fig.55. *Paracleius brincki* (VANSCHUYTBROECK).  
55. Hypopygium.

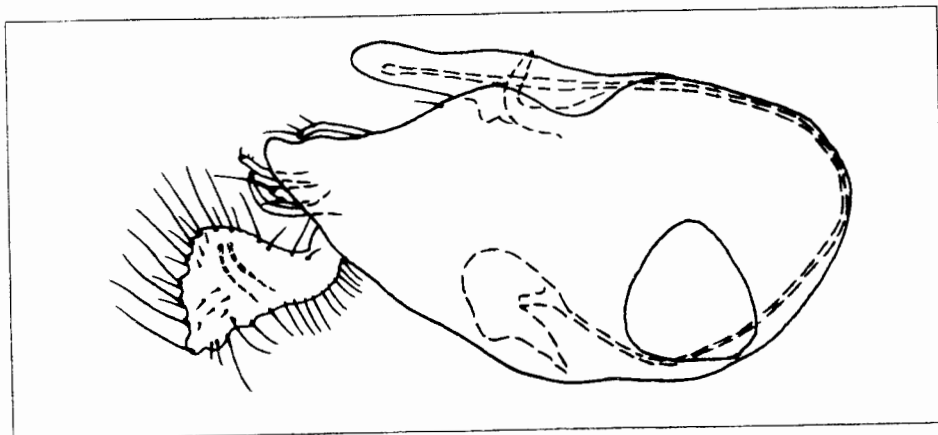


Fig.56. *Paracleius bururi* GRICHANOV, **spec. nov.**  
56. Hypopygium.

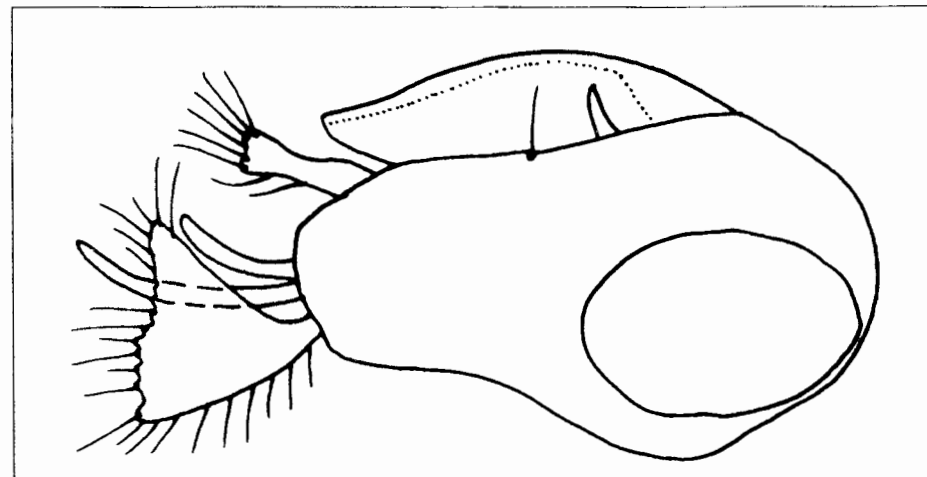


Fig.57. *Paracleius collarti* (CURRAN).  
57. Hypopygium (holotype, dry specimen).

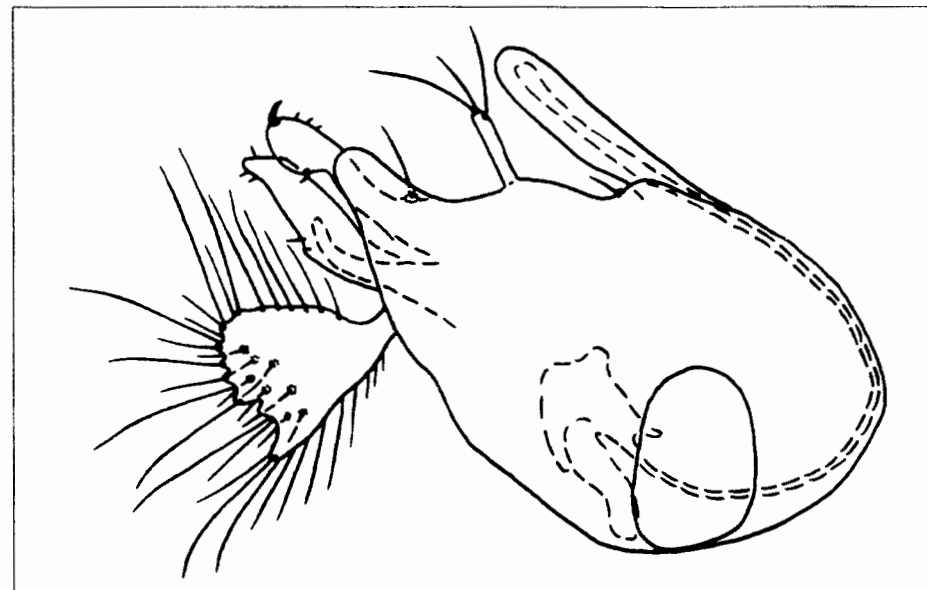


Fig.58. *Paracleius confusibilis* (PARENT).  
58. Hypopygium.

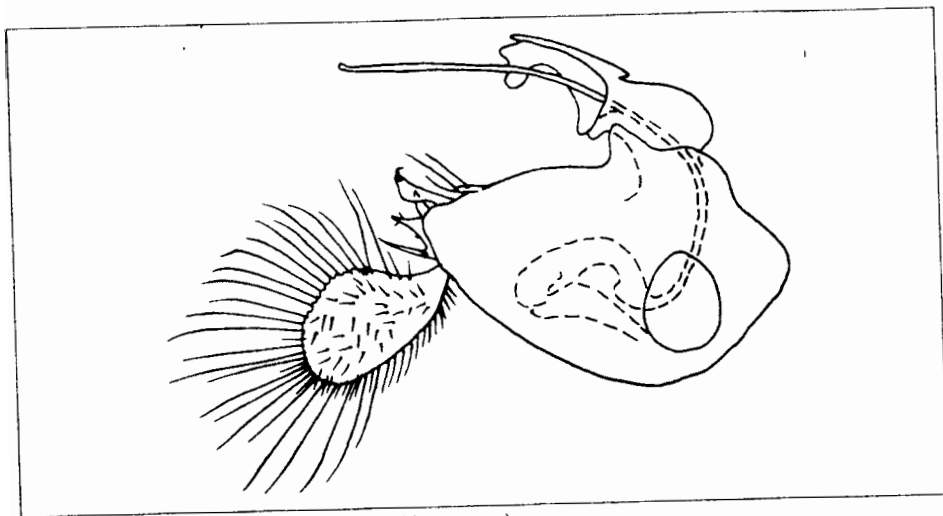
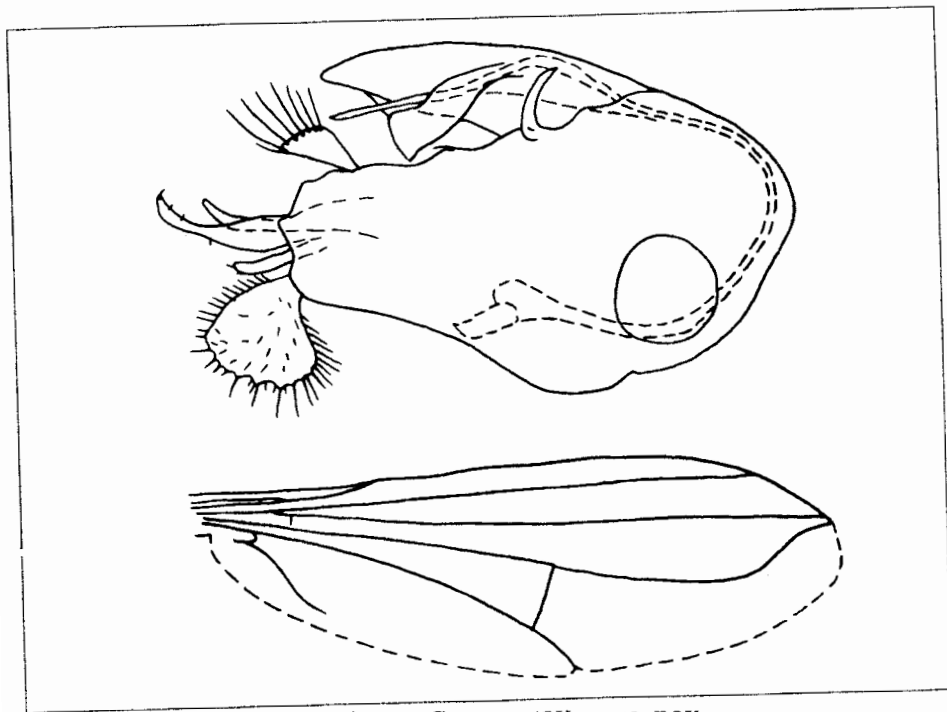


Fig.59. *Paracleius congoensis* (PARENT).  
59. Hypopygium.



Figs.60-61. *Paracleius dedegwa* GRICHANOV, spec. nov.  
60. Hypopygium.  
61. Wing.

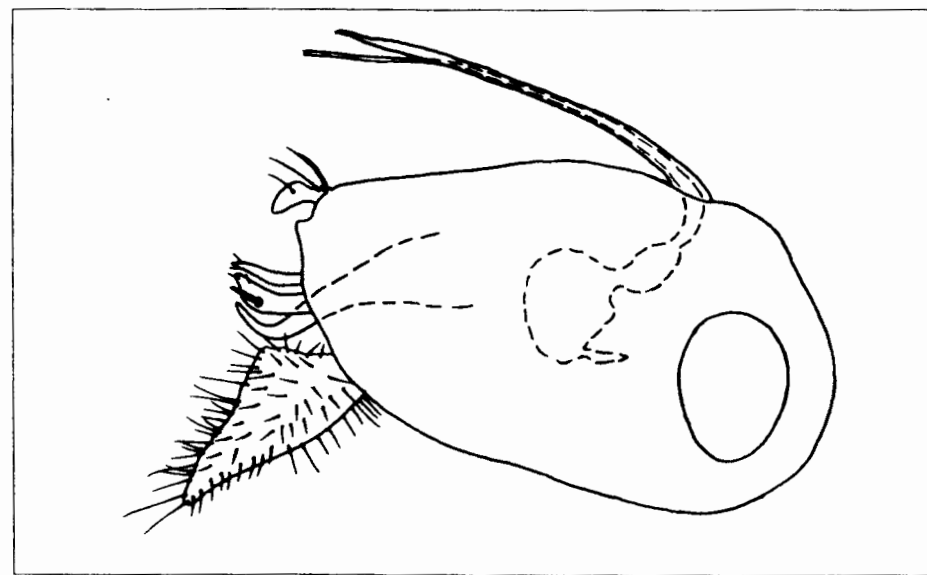


Fig.62. *Paracleius didyensis* GRICHANOV, spec. nov.  
62. Hypopygium.

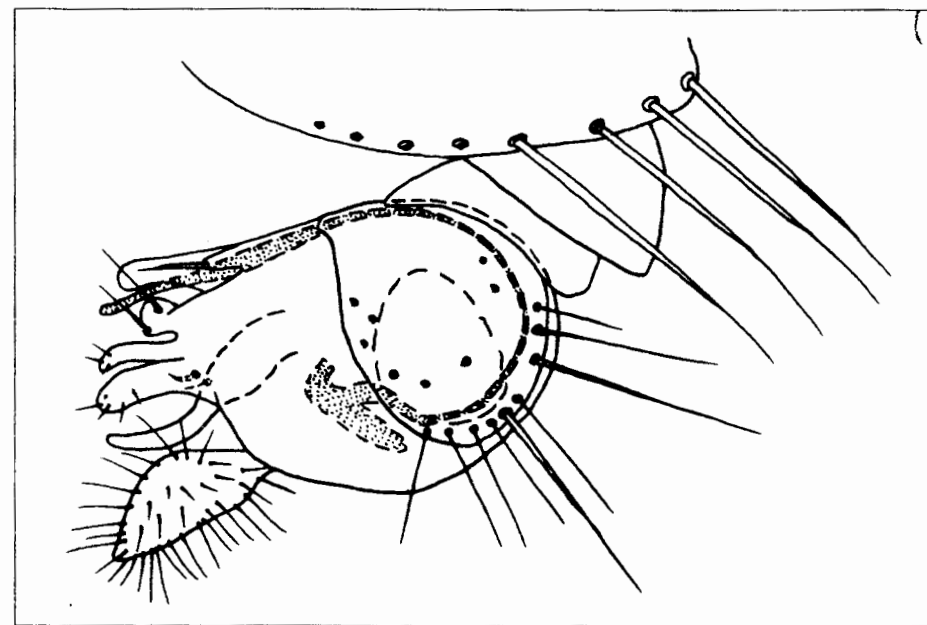
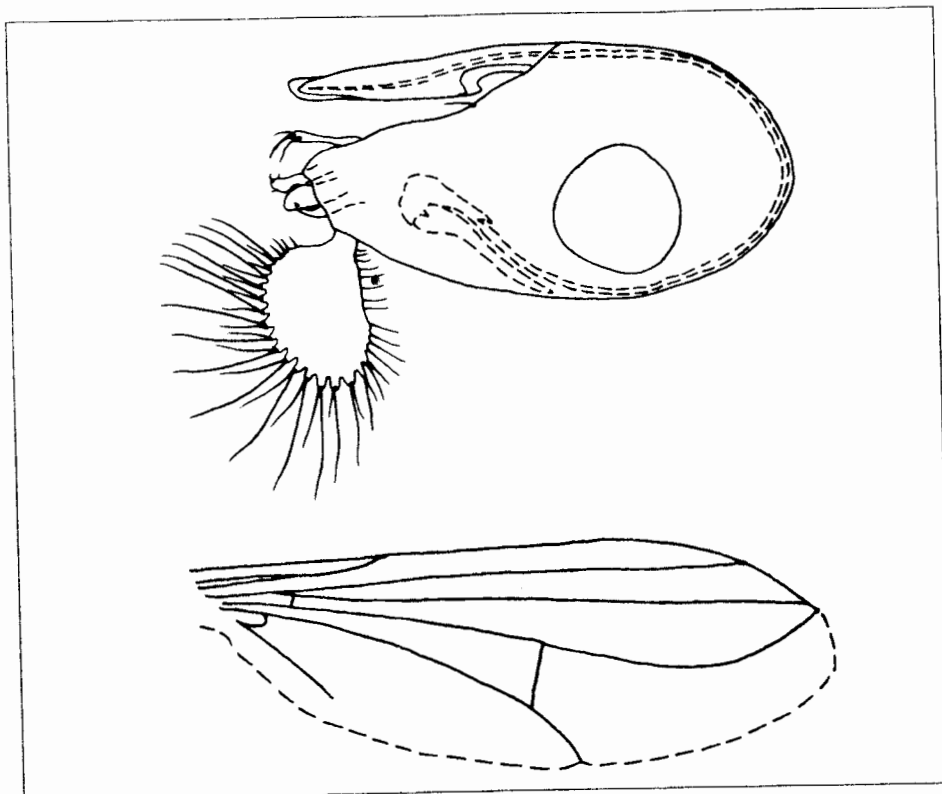


Fig.63. *Paracleius diversifemur* (PARENT).  
63. Apex of male abdomen (V-VIII segments and hypopygium).



Figs.64-65. *Paracleius dobronosovi* GRICHANOV, *spec. nov.*

64. Hypopygium.  
65. Wing.

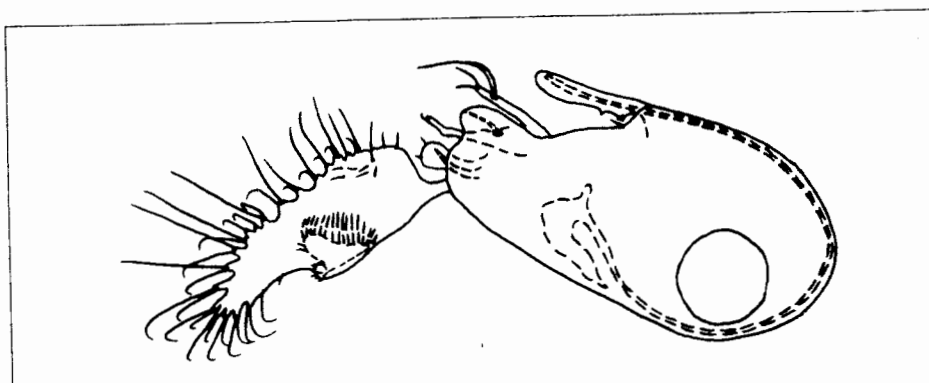


Fig.66. *Paracleius donskoffi* GRICHANOV, *spec. nov.*

66. Hypopygium.

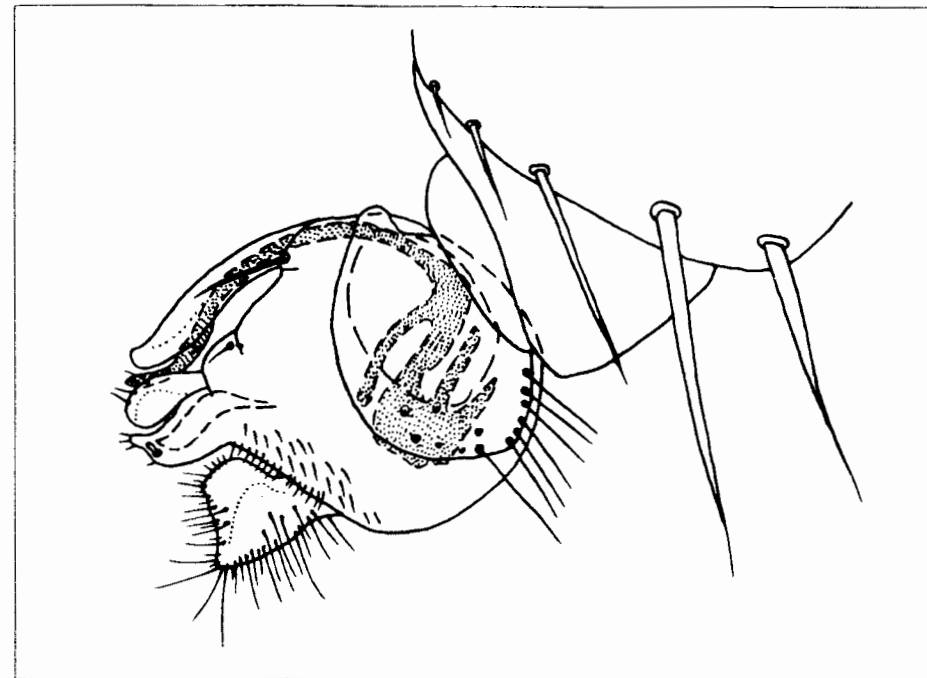


Fig.67. *Paracleius echinatus* (STACKELBERG).

67. Apex of male abdomen (V-VIII segments and hypopygium).

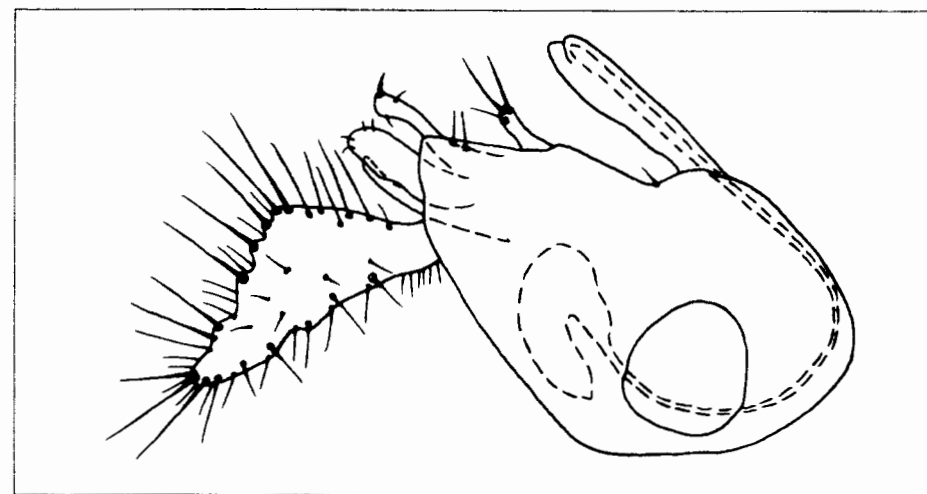
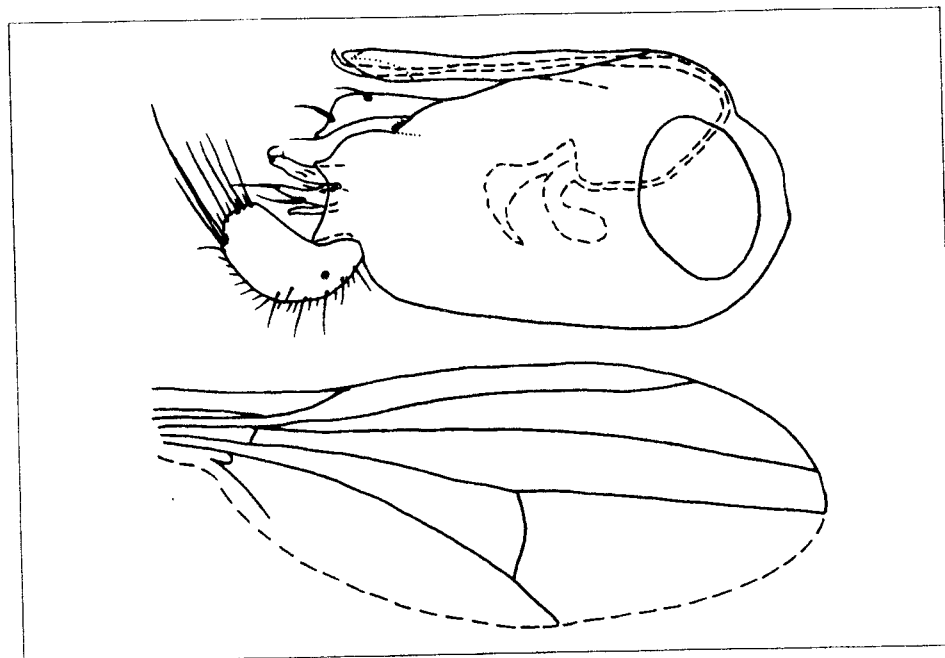


Fig.68. *Paracleius emascuatus* (PARENT).

68. Hypopygium.





Figs.69-70. *Paracleius fernandopoensis* GRICHANOV, **spec. nov.**

69. Hypopygium.  
70. Wing.

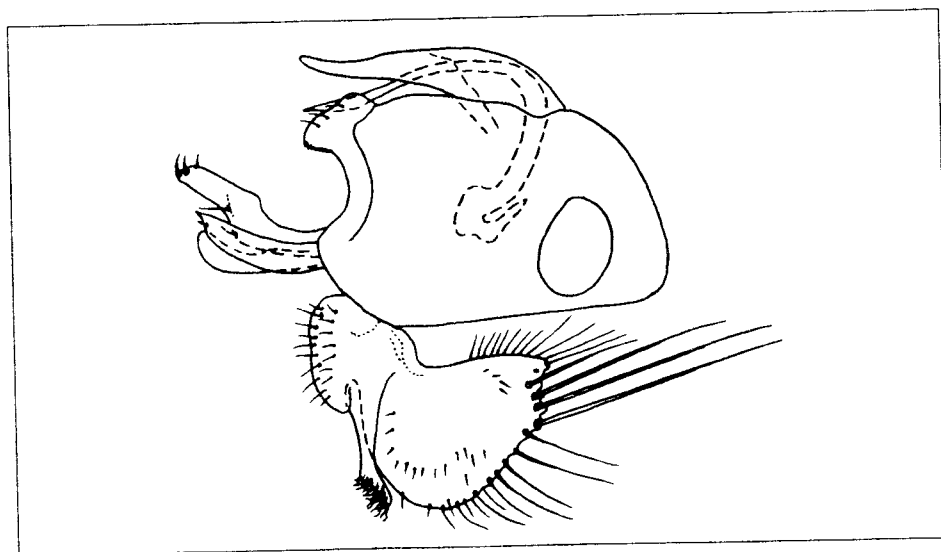


Fig.71. *Paracleius funditor* CURRAN.  
71. Hypopygium.

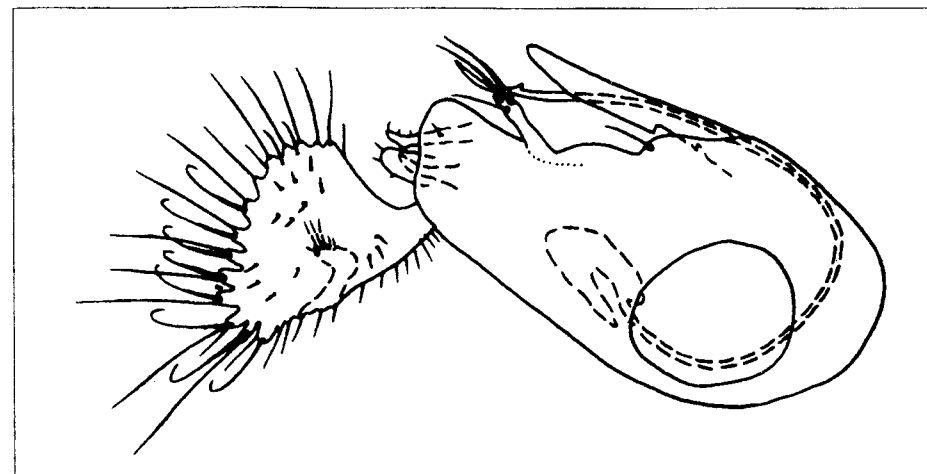


Fig.72. *Paracleius gabonensis* GRICHANOV, **spec. nov.**  
72. Hypopygium.

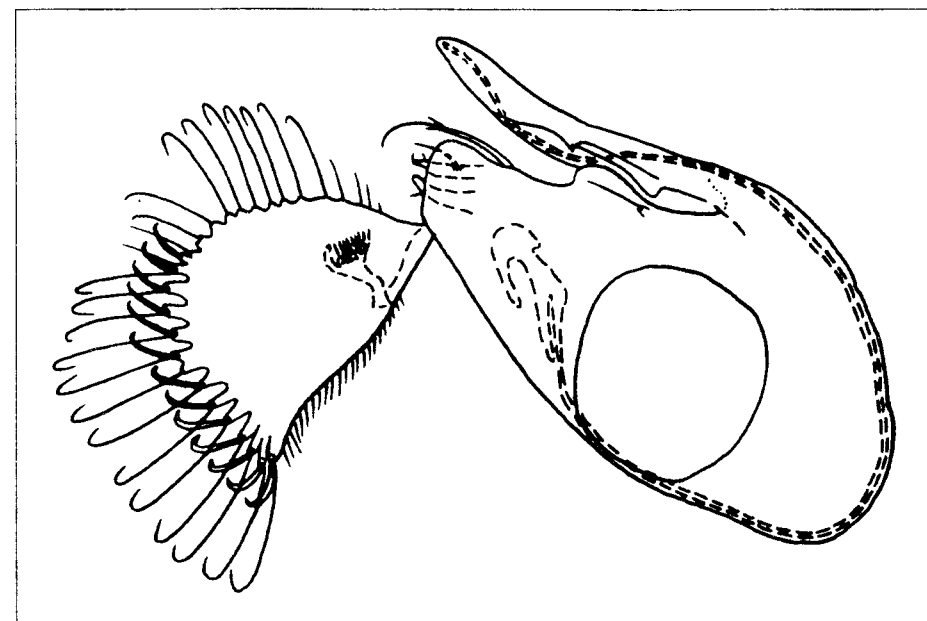
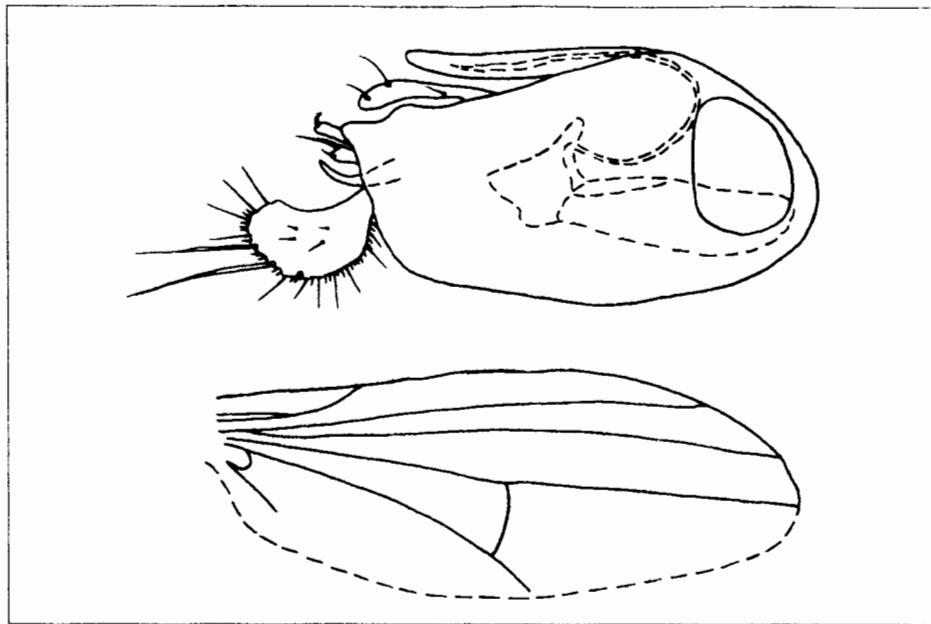


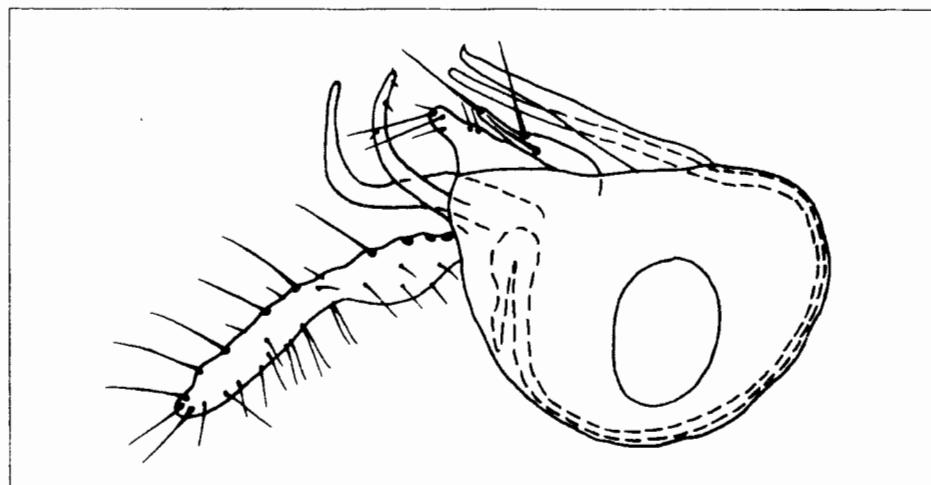
Fig.73. *Paracleius ineditus* (PARENT).  
73. Hypopygium.



Figs.74-75. *Paracleius irinae* GRICHANOV, **spec. nov.**

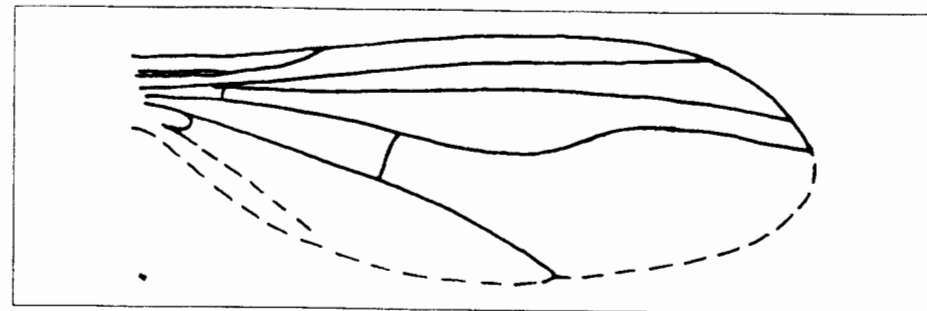
74. Hypopygium.

75. Wing.



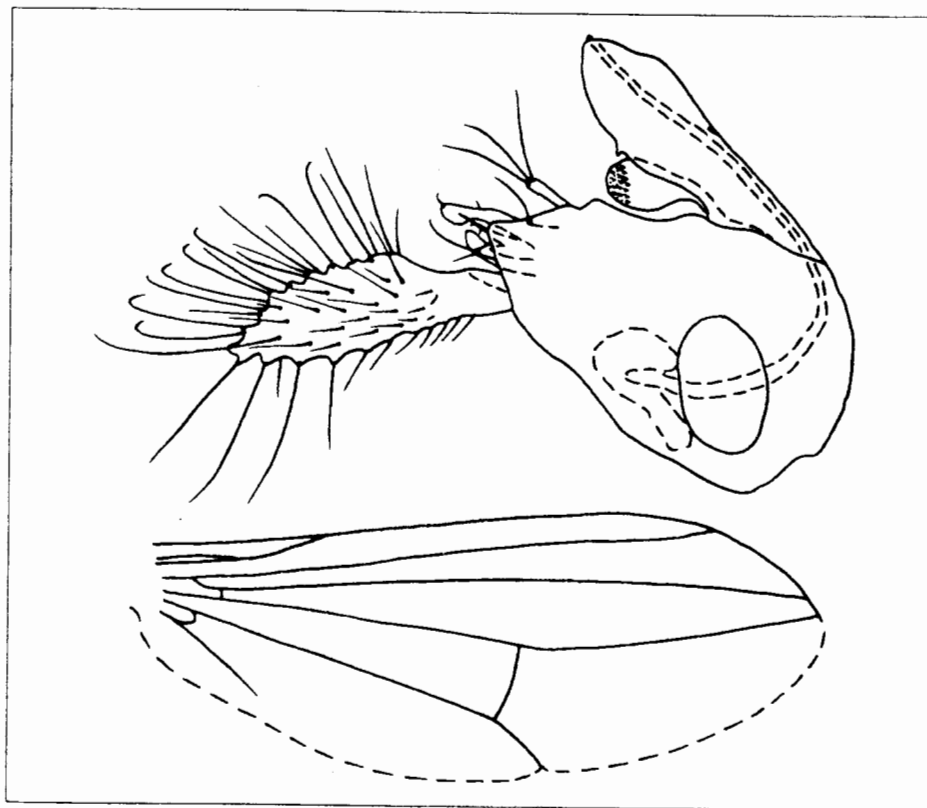
Figs.76-77. *Paracleius jasoni* GRICHANOV, **spec. nov.**

76. Hypopygium.



Figs.76-77. *Paracleius jasoni* GRICHANOV, **spec. nov.**

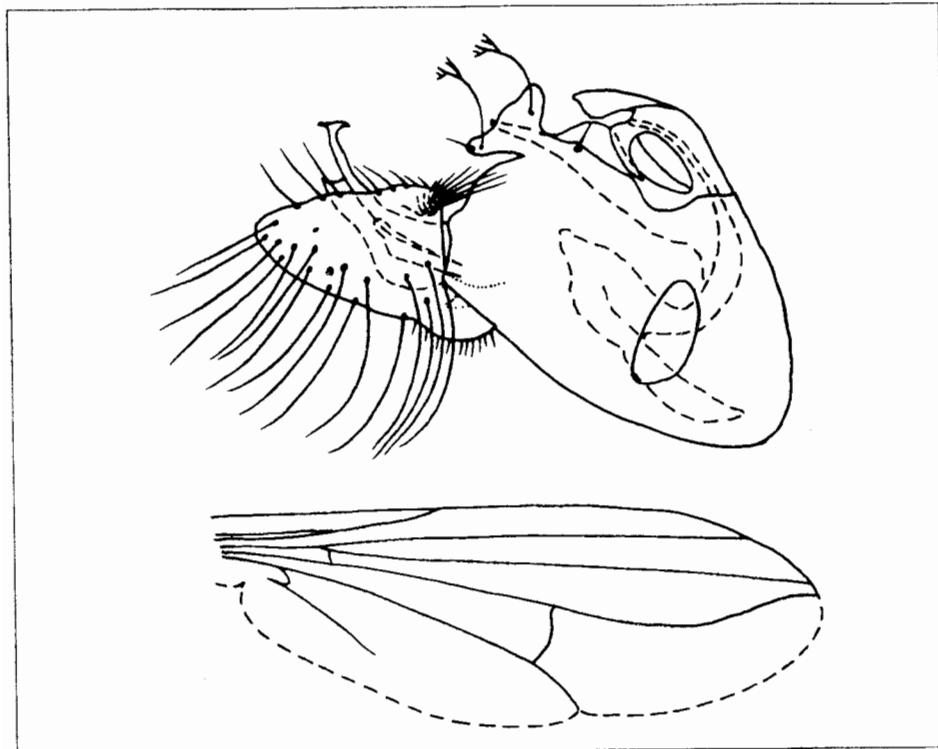
77. Wing.



Figs.78-79. *Paracleius julius* GRICHANOV, **spec. nov.**

78. Hypopygium.

79. Wing.



Figs.80-81. *Paracleius kabasha* GRICHANOV, **spec. nov.**

80. Hypopygium.

81. Wing.

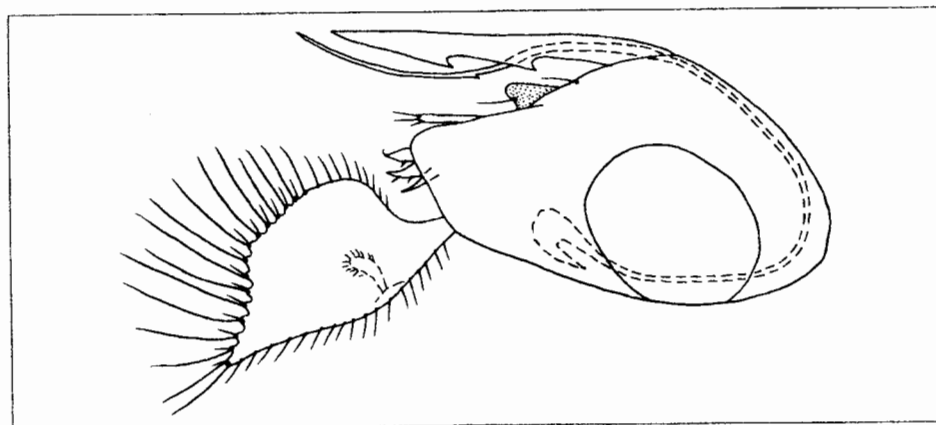
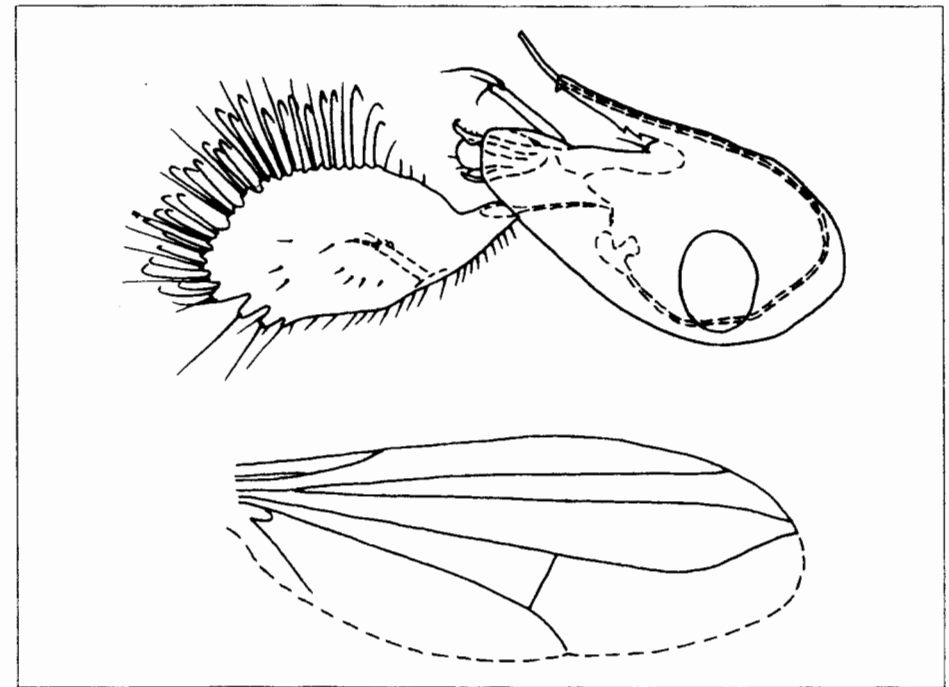


Fig.82. *Paracleius kassebeeri* GRICHANOV, **spec. nov.**

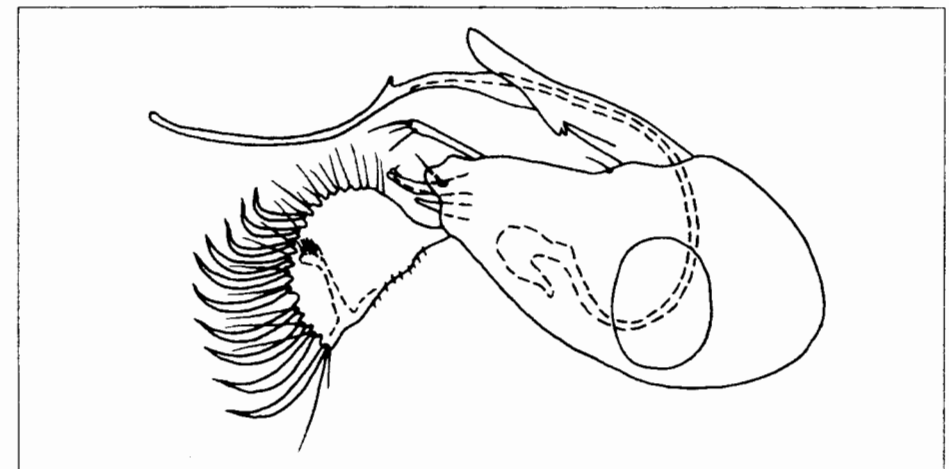
82. Hypopygium.



Figs.83-84. *Paracleius leidenrothi* GRICHANOV, **spec. nov.**

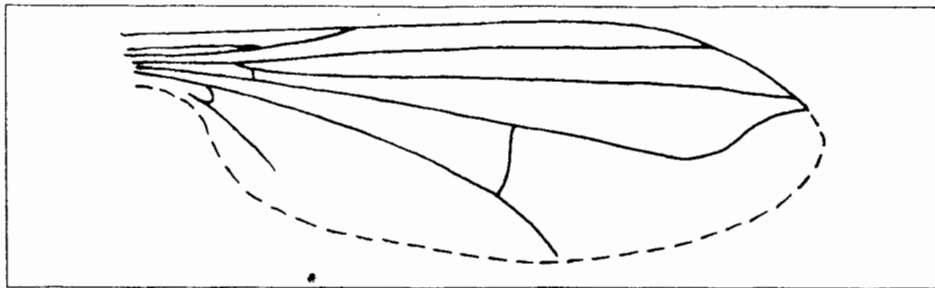
83. Hypopygium.

84. Wing.



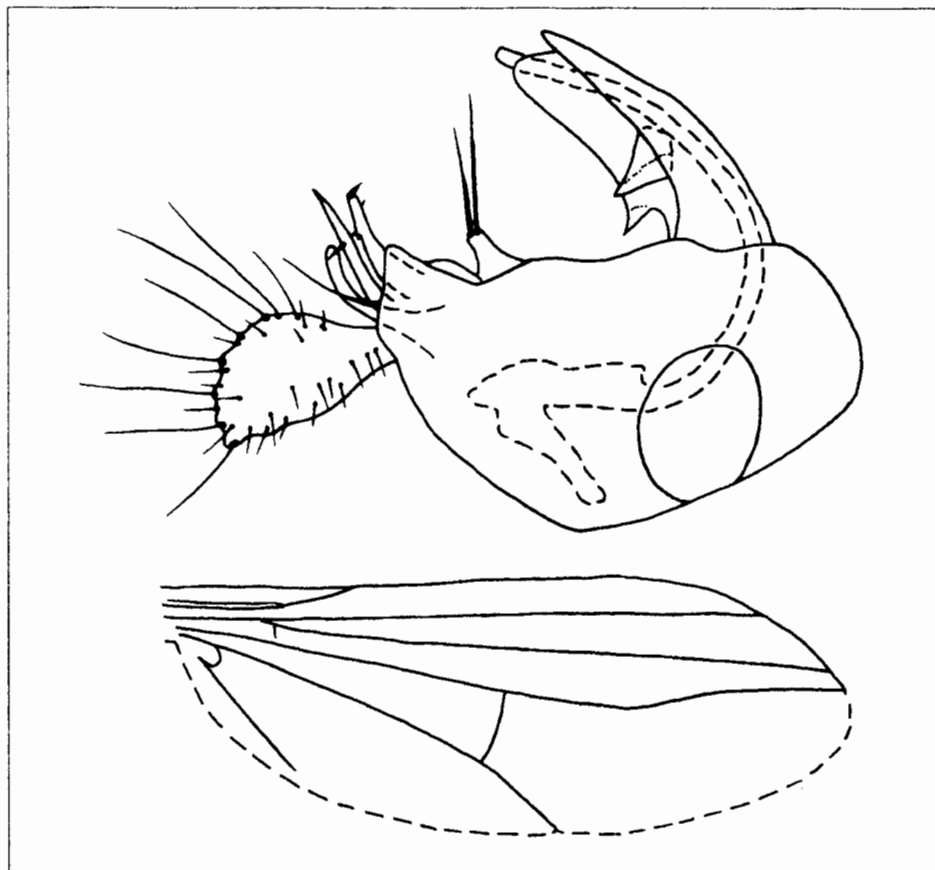
Figs.85-86. *Paracleius lippensi* GRICHANOV, **spec. nov.**

85. Hypopygium.



Figs.85-86. *Paracleius lippensi* GRICHANOV, **spec. nov.**

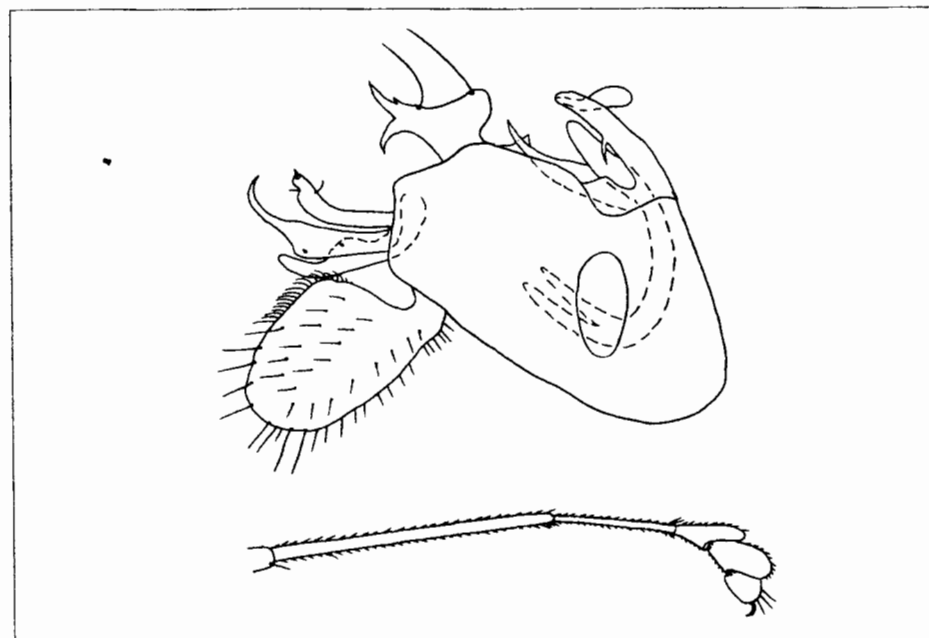
86. Wing.



Figs.87-88. *Paracleius machakos* GRICHANOV, **spec. nov.**

87. Hypopygium.

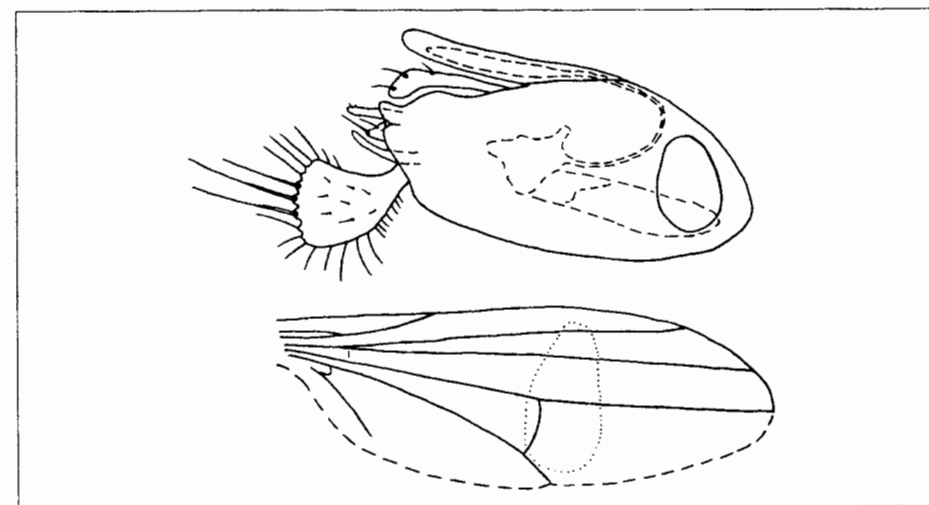
88. Wing.



Figs.89-90. *Paracleius maranguensis* VANSCHUYTBROECK.

89. Hypopygium.

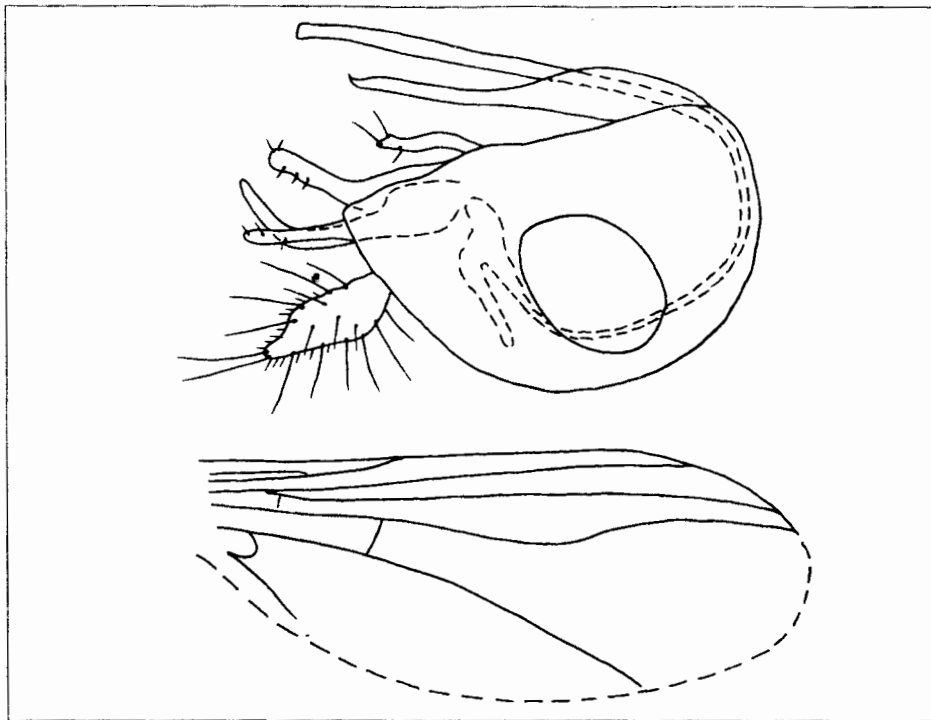
90. Fore tarsus.



Figs.91-92. *Paracleius martius* GRICHANOV, **spec. nov.**

91. Hypopygium.

92. Wing.



Figs.93-94. *Paracleius michaeli* GRICHANOV, **spec. nov.**

93. Hypopygium.

94. Wing.

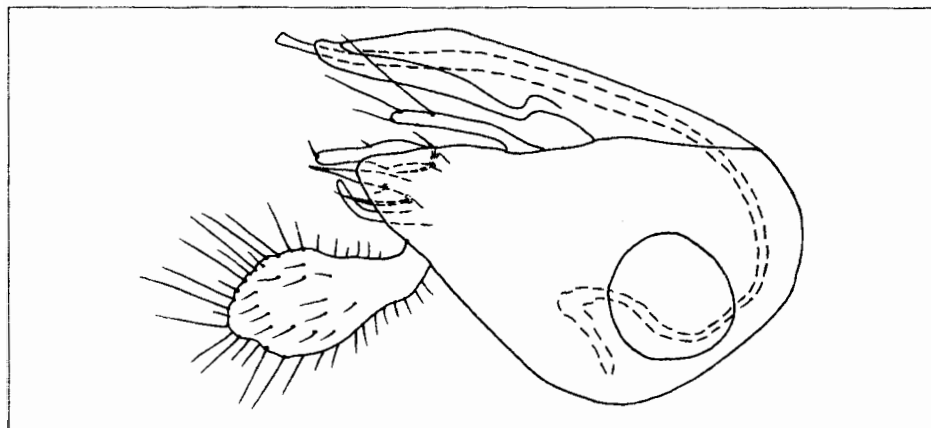
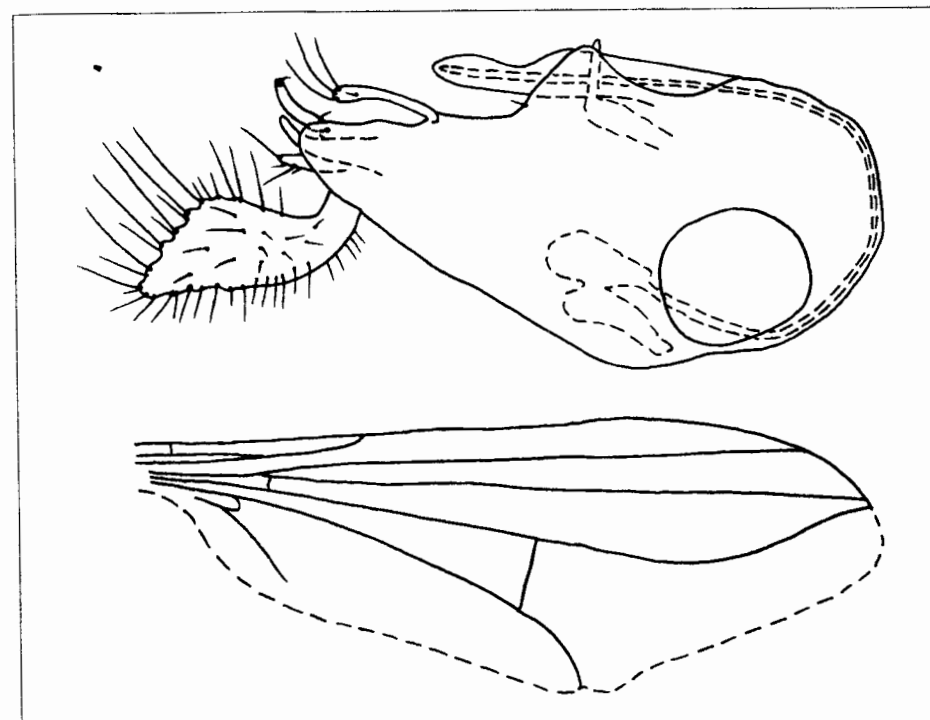


Fig.95. *Paracleius micrurus* (PARENT).

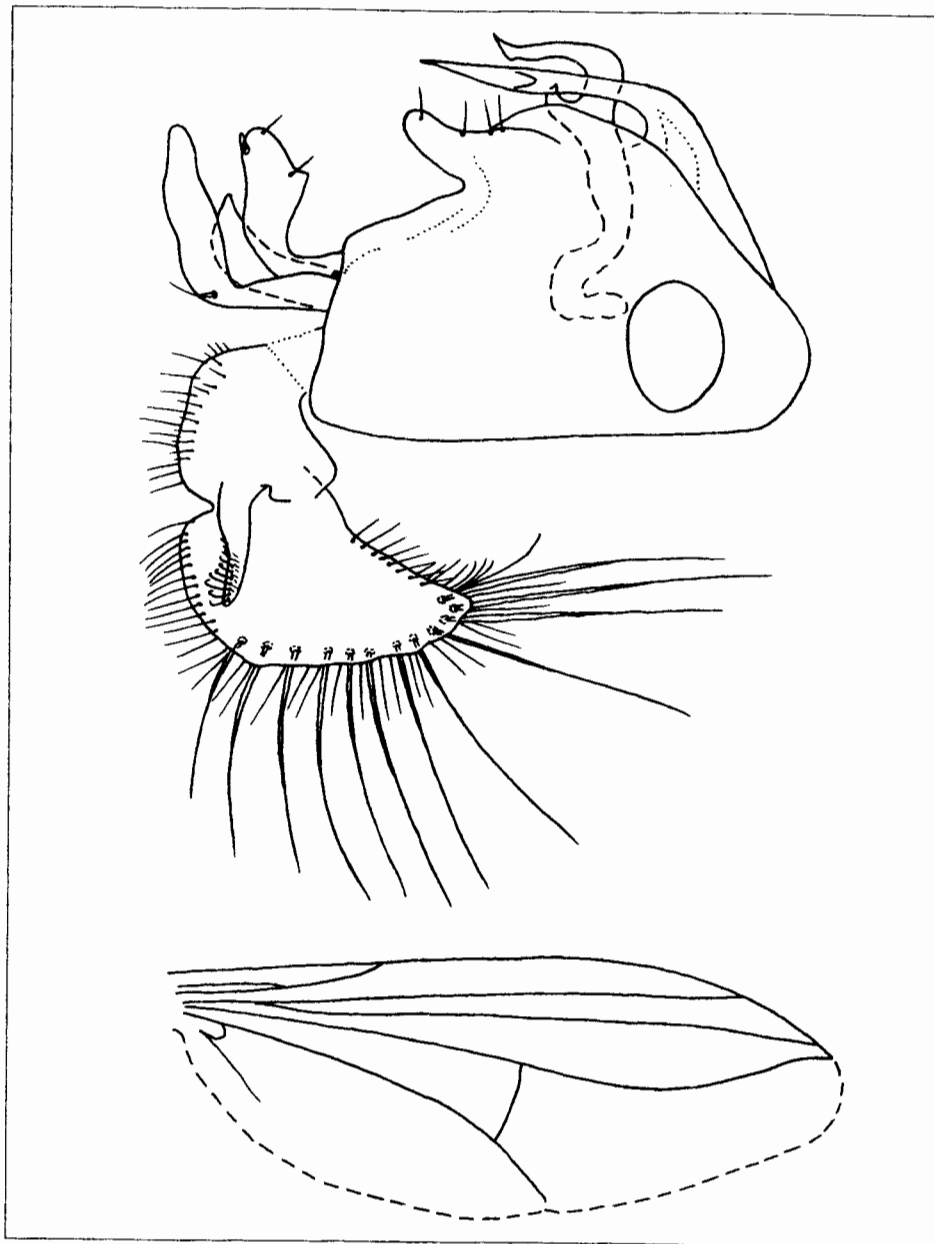
95. Hypopygium.



Figs.96-97. *Paracleius miripennis* GRICHANOV, **spec. nov.**

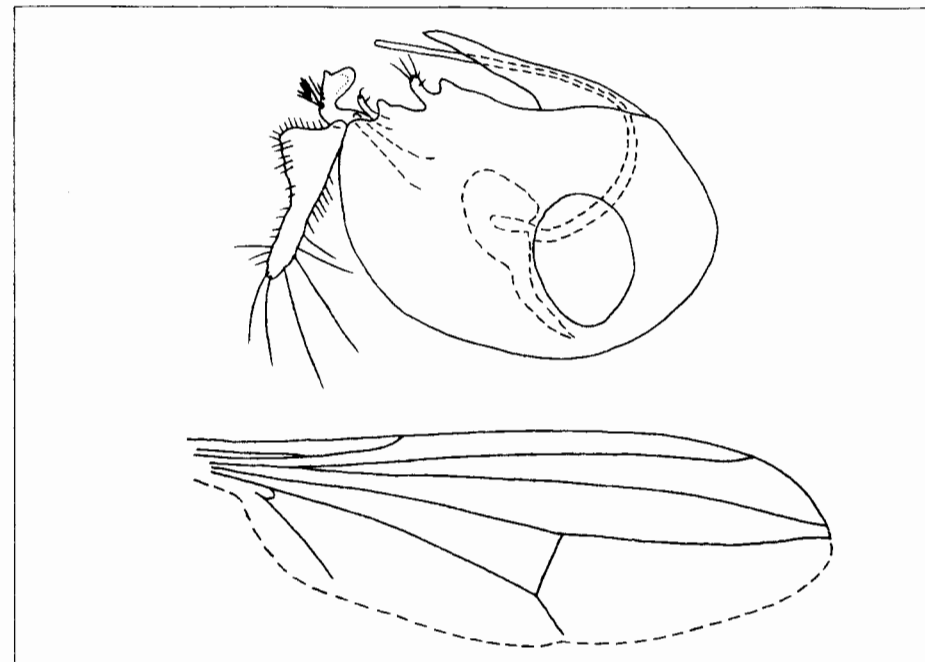
96. Hypopygium.

97. Wing.



Figs.98-99. *Paracleius miritarsus* GRICHANOV, **spec. nov.**

98. Hypopygium (cercus, inner view).  
99. Wing.



Figs.100-101. *Paracleius naglisi* GRICHANOV, **spec. nov.**

100. Hypopygium.  
101. Wing.

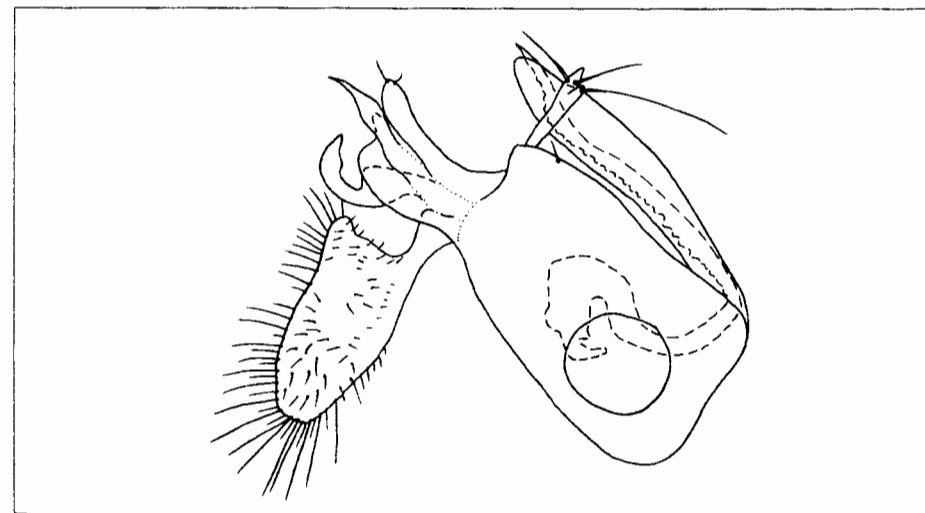
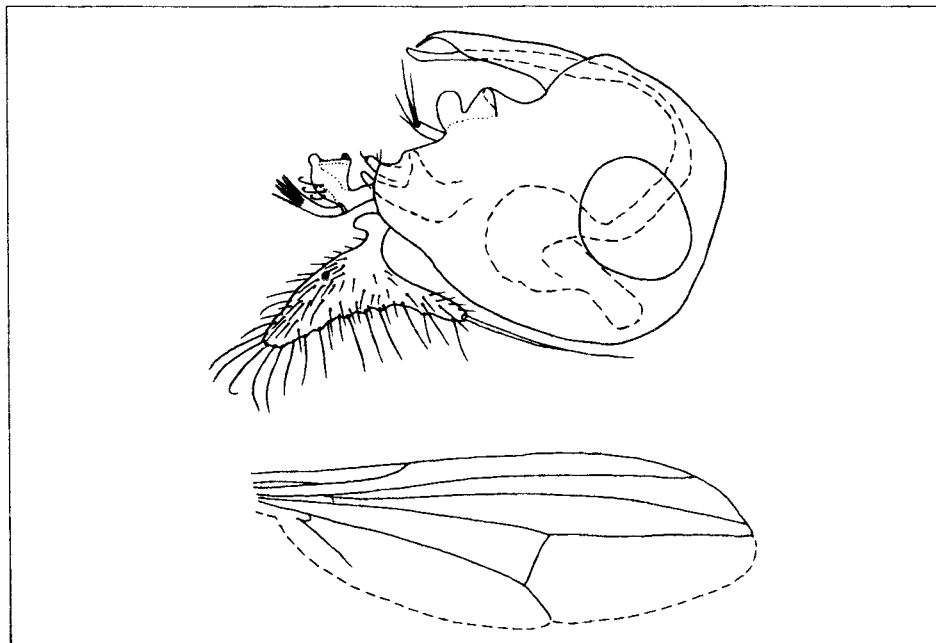


Fig.102. *Paracleius nebulo* PARENT.

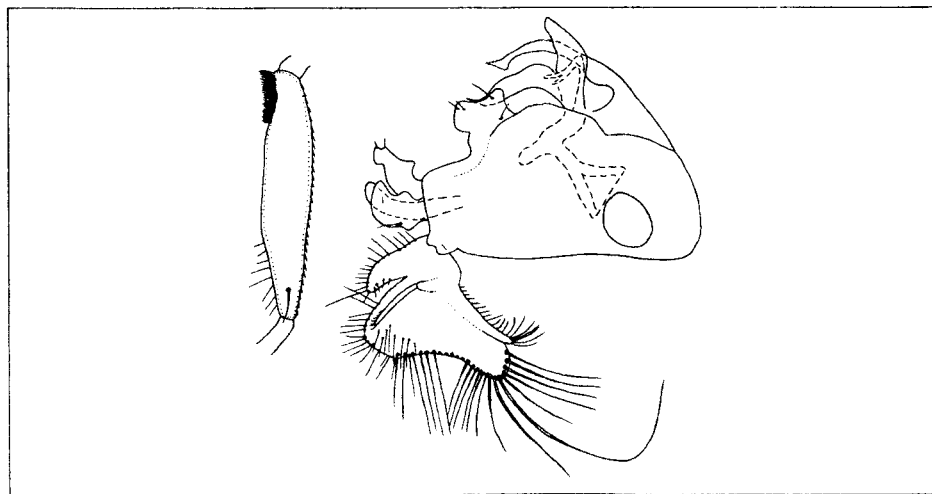
102. Hypopygium.



Figs.103-104. *Paracleius neocongoensis* GRICHANOV, **spec. nov.**

103. Hypopygium.

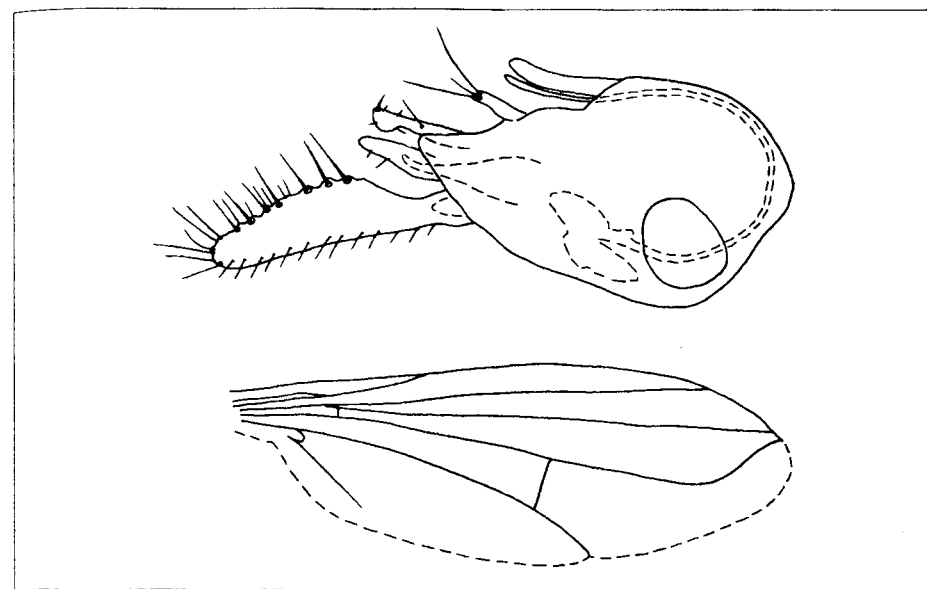
104. Wing.



Figs.105-106. *Paracleius ngarukaensis* VANSCHUYTBROECK.

105. Hypopygium (cercus, inner view).

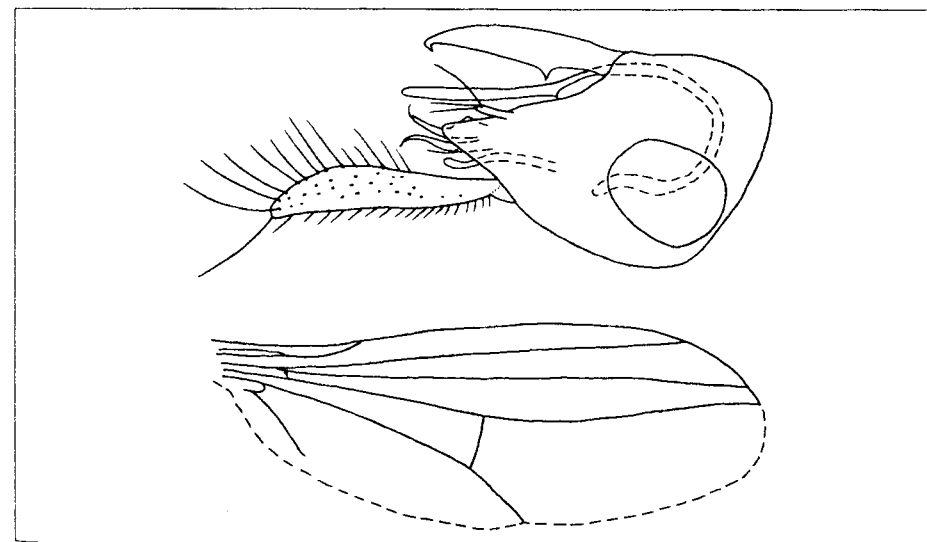
106. Mid femur, anterior view.



Figs.107-108. *Paracleius nigeriensis* GRICHANOV, **spec. nov.**

107. Hypopygium.

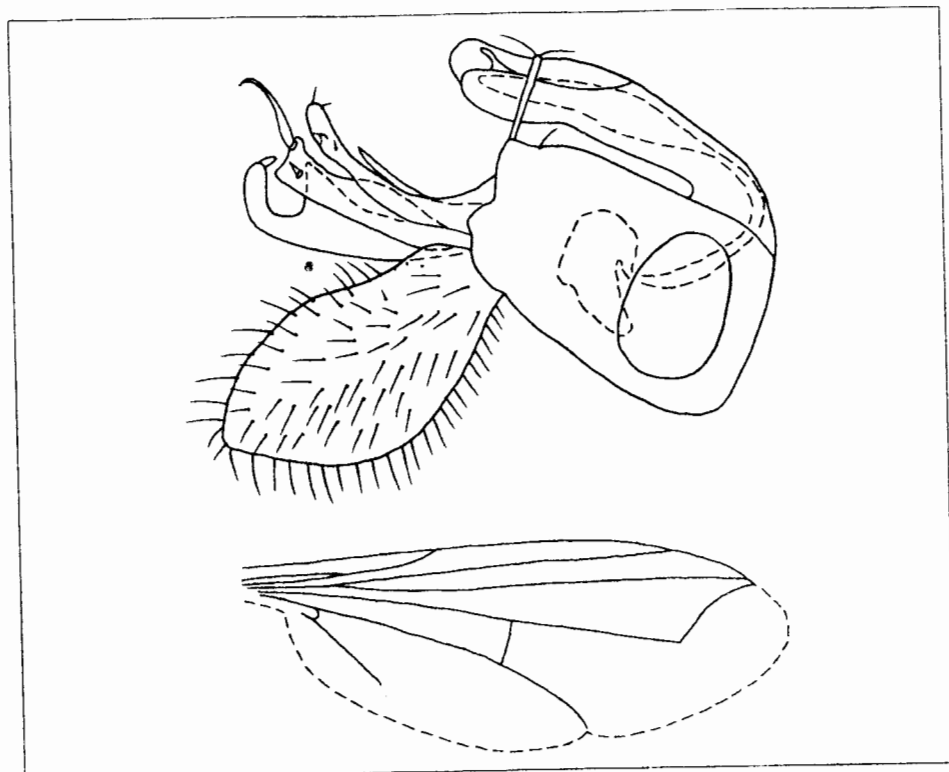
108. Wing.



Figs.109-110. *Paracleius nigripalpis* GRICHANOV, **spec. nov.**

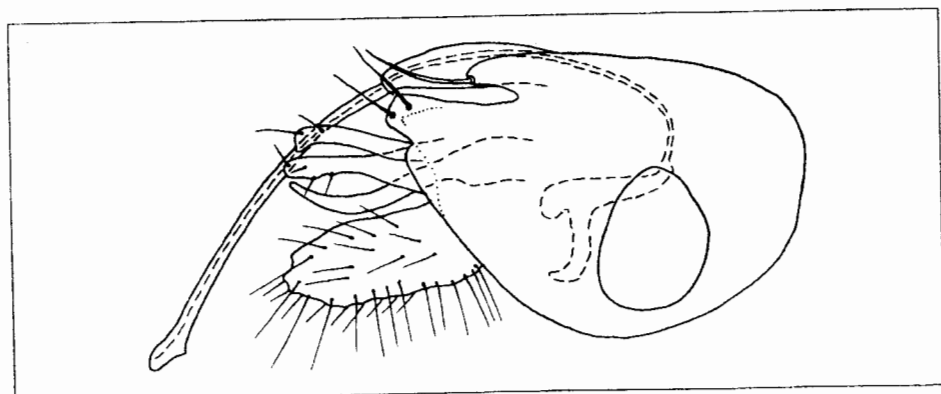
109. Hypopygium.

110. Wing.



Figs.111-112. *Paracleius olejniceki* GRICHANOV, spec. nov.

111. Hypopygium.  
112. Wing.



Figs.113. *Paracleius pectinifer* (PARENT).  
113. Hypopygium.

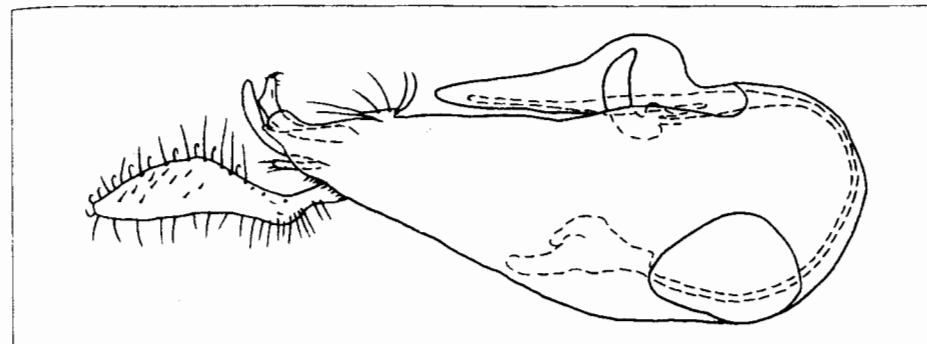
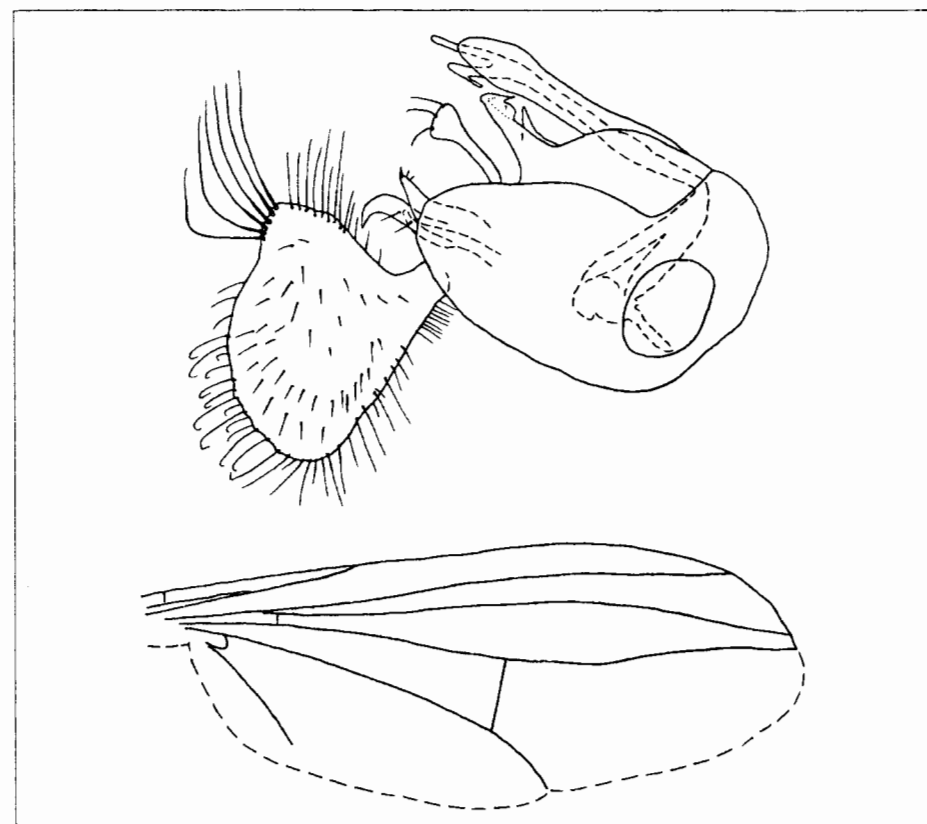


Fig.114. *Paracleius pedunculatus* (PARENT).  
114. Hypopygium.



Figs.115-116. *Paracleius reavelli* GRICHANOV, spec. nov.

115. Hypopygium.  
116. Wing.



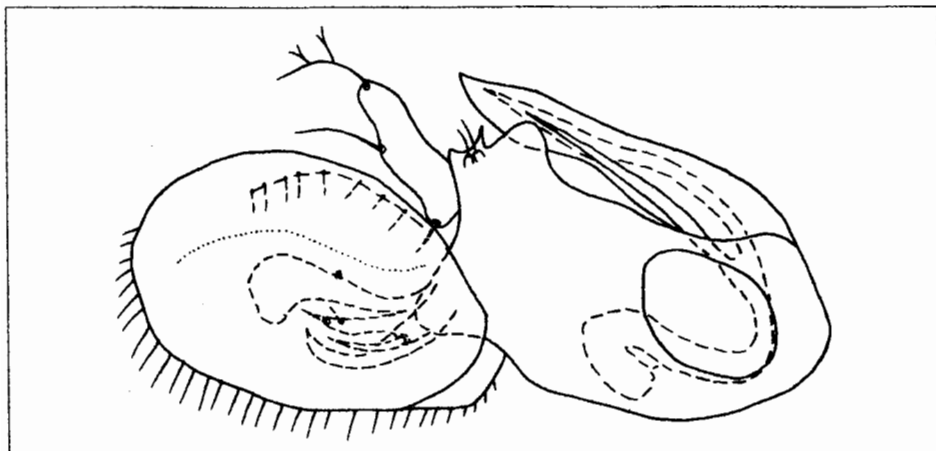
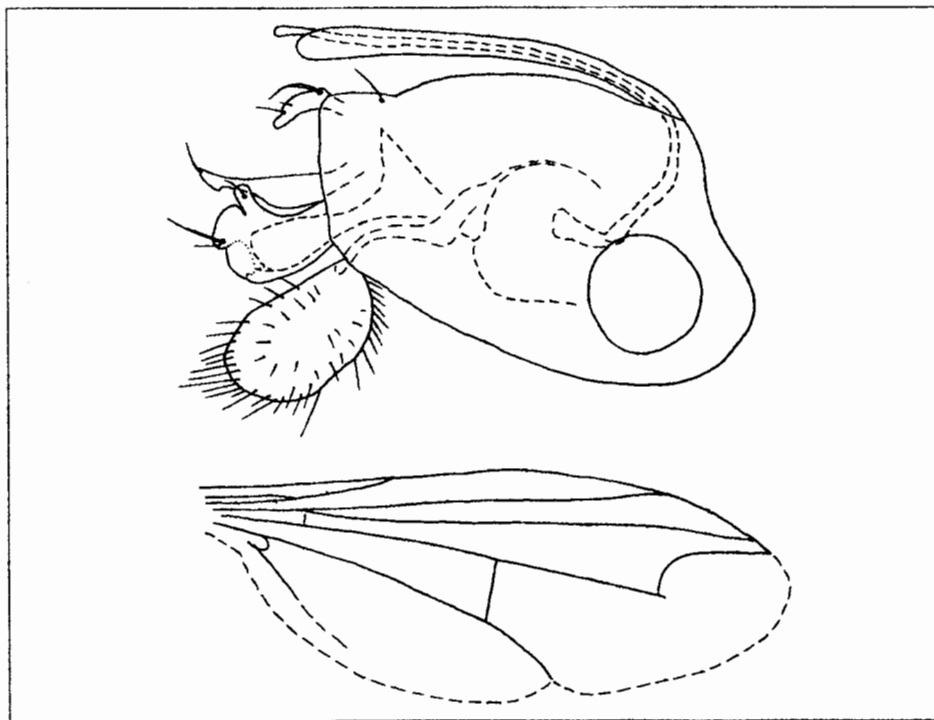


Fig.117. *Paracleius sanjensis* GRICHANOV, **spec. nov.**  
117. Hypopygium.



Figs.118-119. *Paracleius thompsoni* GRICHANOV, **spec. nov.**  
118. Hypopygium.  
119. Wing.

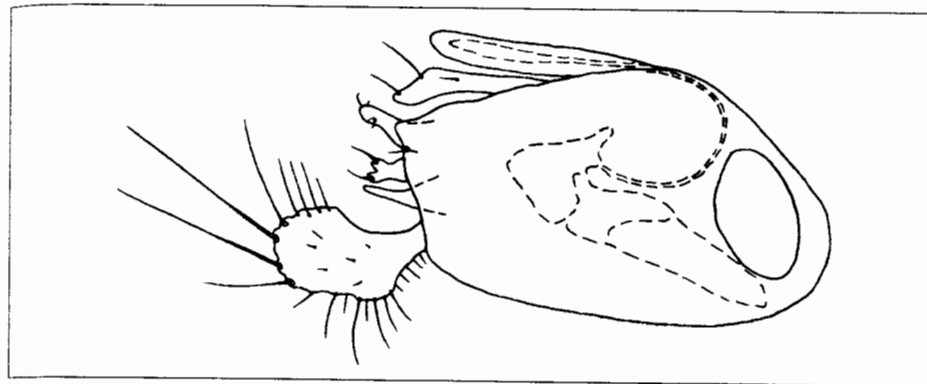


Fig.120. *Paracleius umbricola* (PARENT).  
120. Hypopygium.

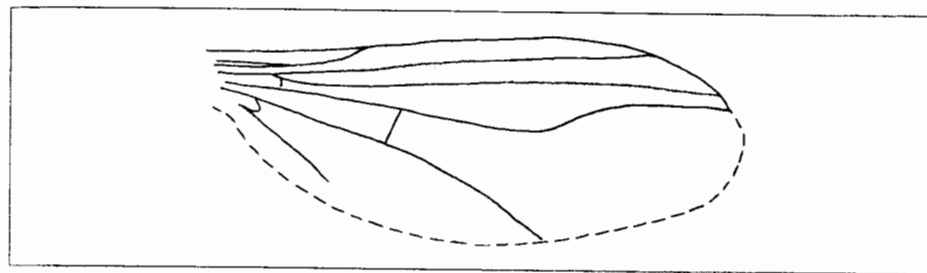


Fig.121. *Paracleius umngazi* GRICHANOV, **spec. nov.**  
121. Wing.

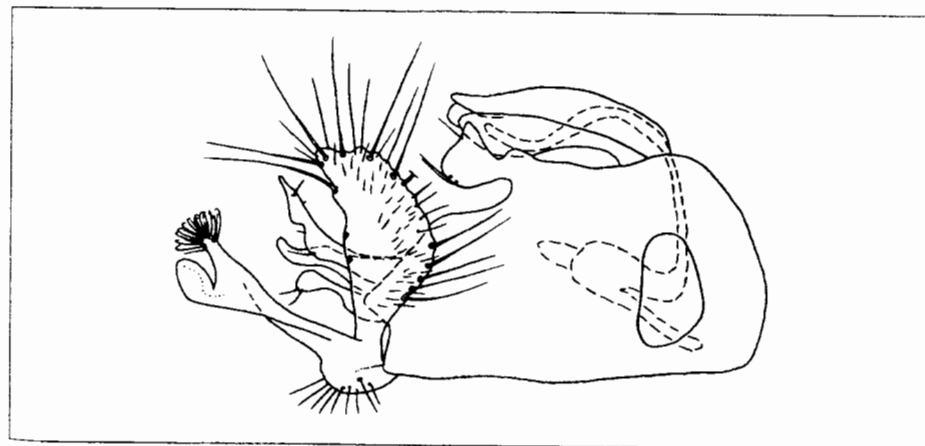
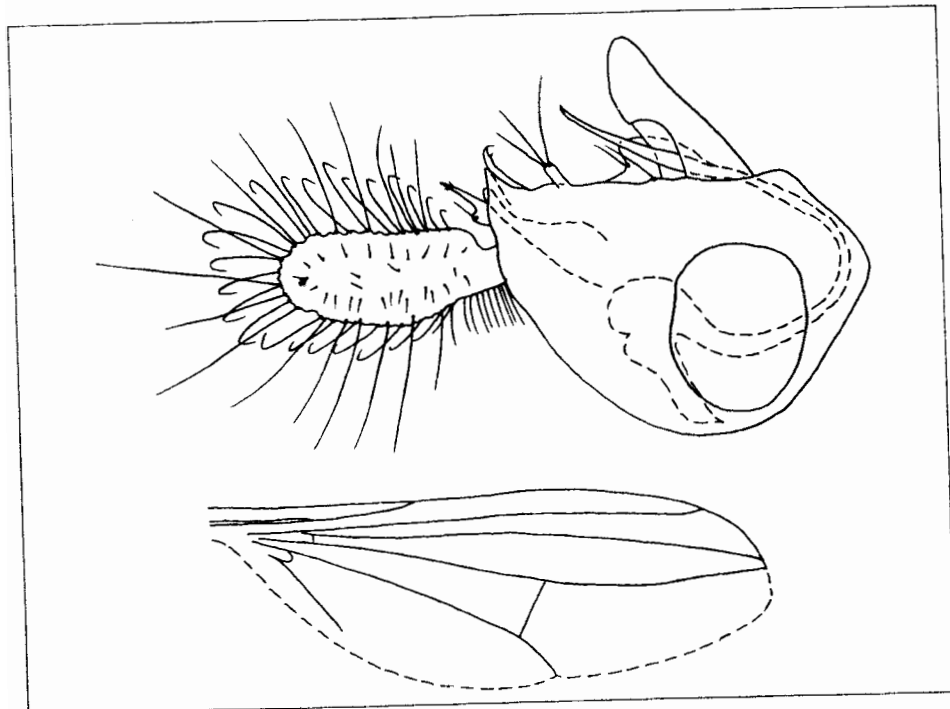
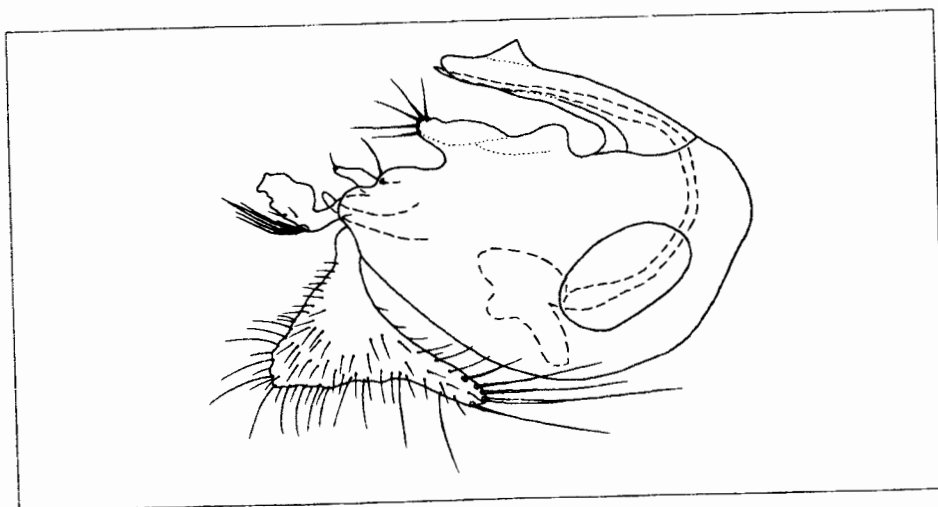


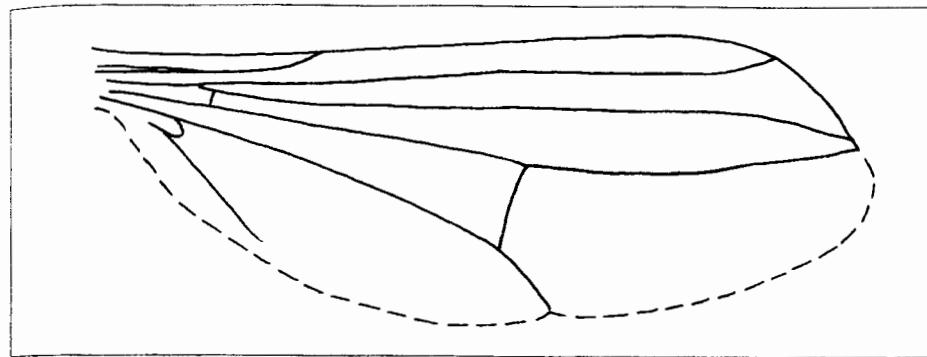
Fig.122. *Paracleius upembaensis* GRICHANOV, **spec. nov.**  
122. Hypopygium.



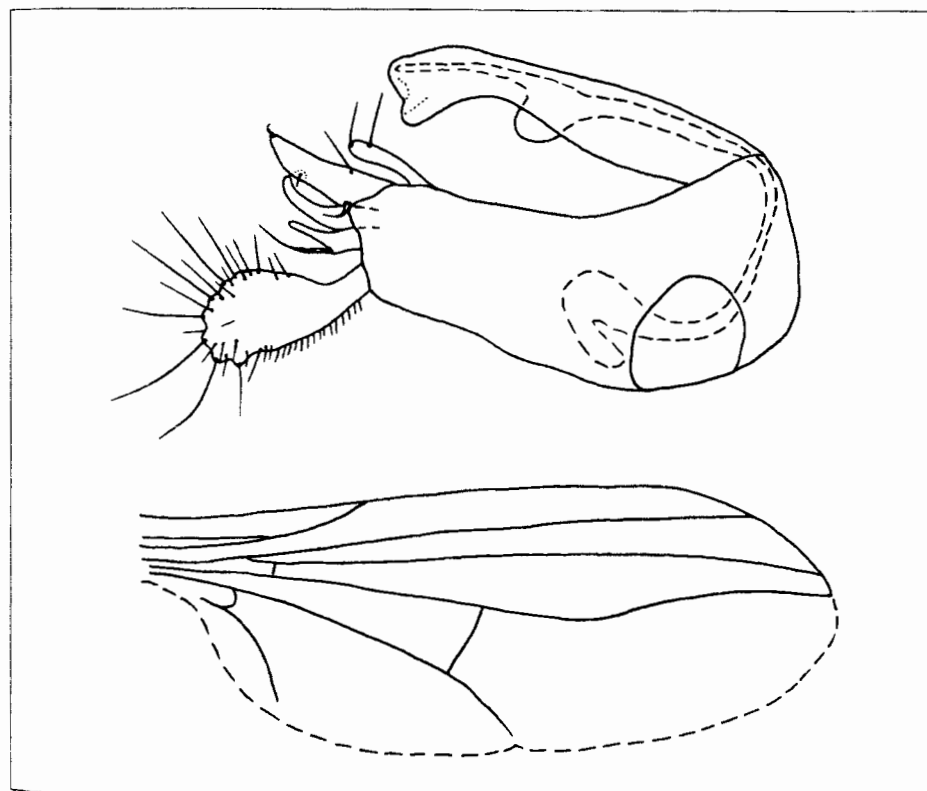
Figs.123-124. *Paracleius vilkamaai* GRICHANOV, **spec. nov.**  
 123. Hypopygium.  
 124. Wing.



Figs.125-126. *Paracleius whittingtoni* GRICHANOV, **spec. nov.**  
 125. Hypopygium.



Figs.125-126. *Paracleius whittingtoni* GRICHANOV, **spec. nov.**  
 126. Wing.



Figs.127-128. *Paracleius zamotailovi* GRICHANOV, **spec. nov.**  
 127. Hypopygium.  
 128. Wing.

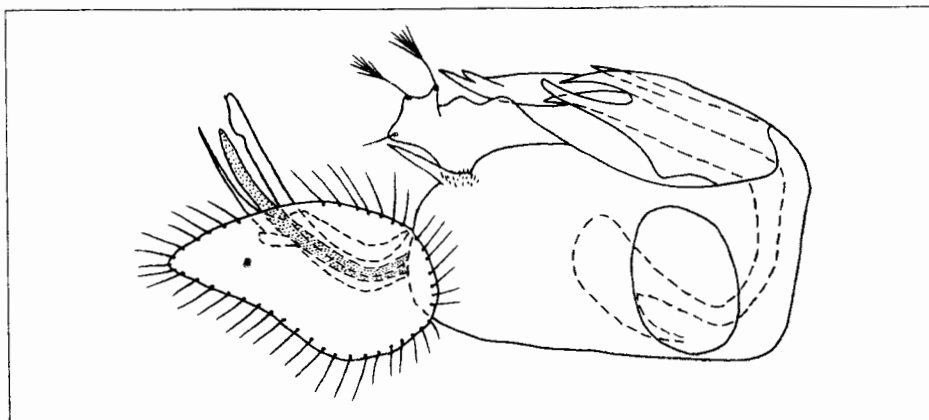
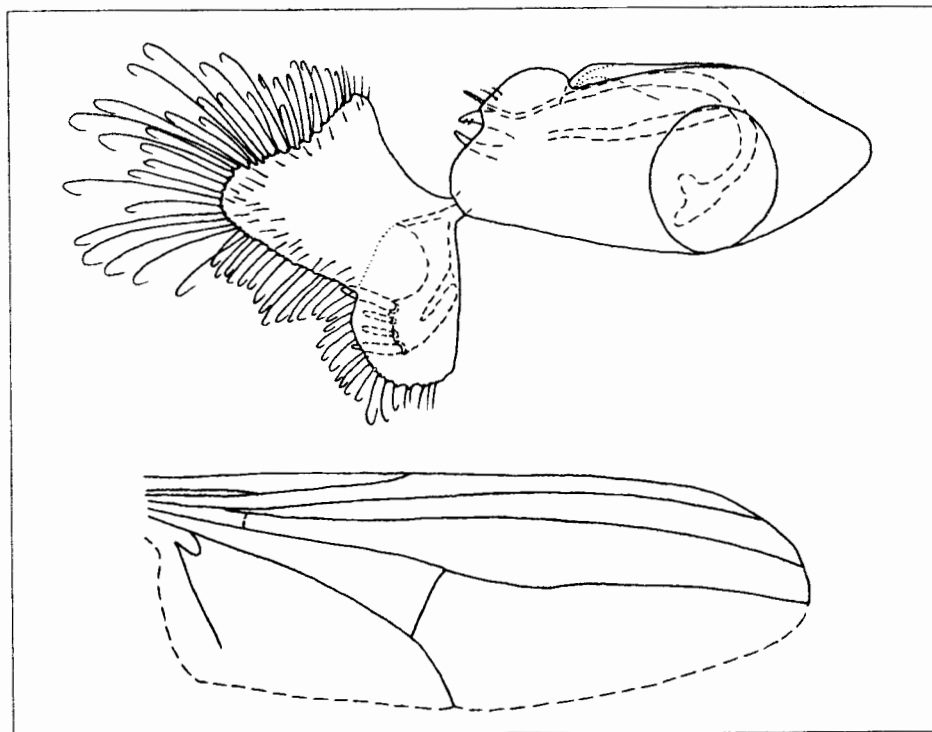
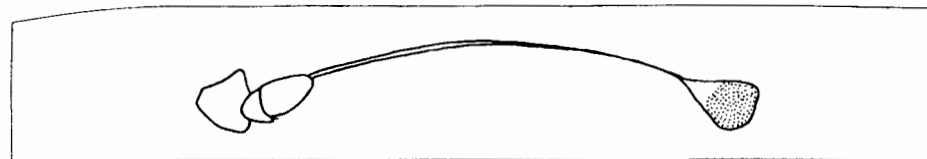


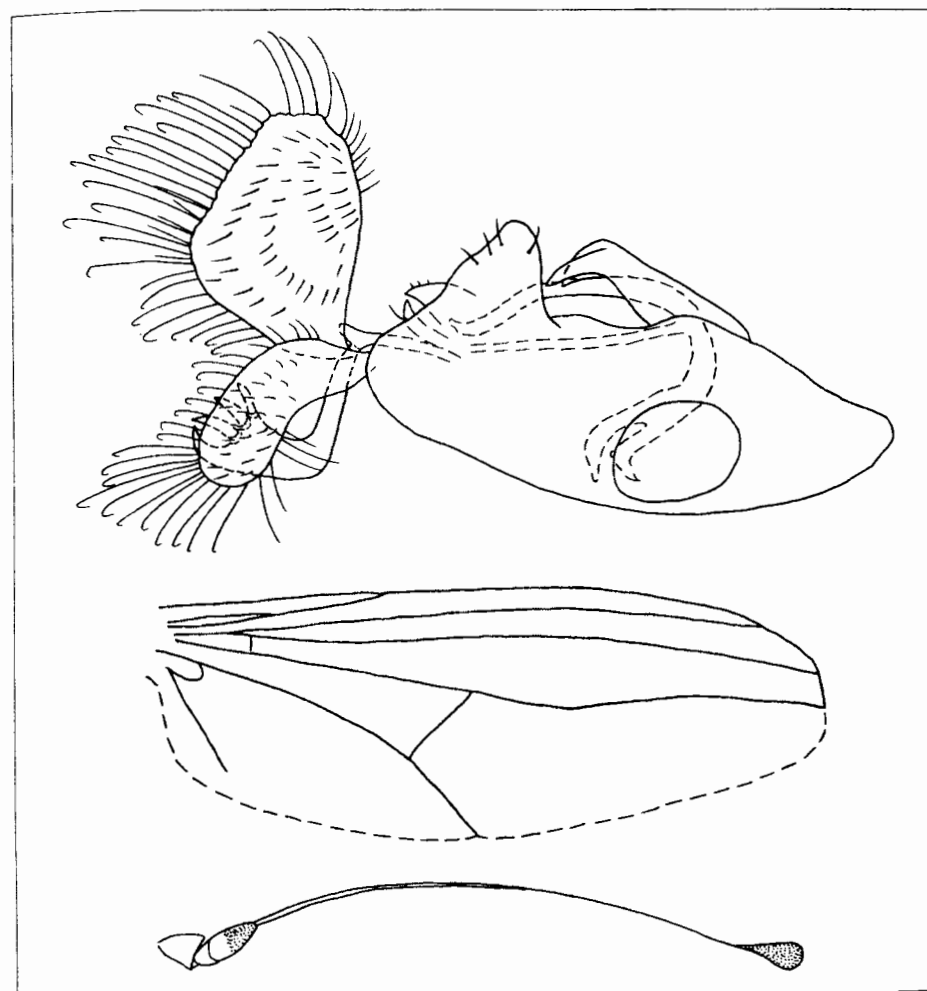
Fig.129. *Paracleius zogualensis* GRICHANOV, **spec. nov.**  
129. Hypopygium.



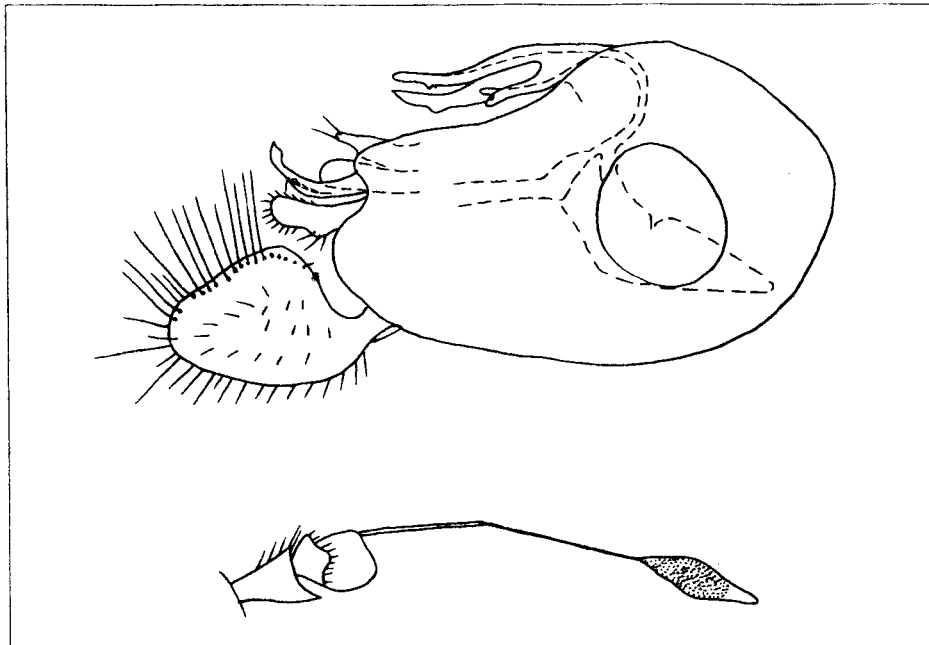
Figs.130-132. *Polymedon ethiopiensis* GRICHANOV, **spec. nov.**  
130. Hypopygium.  
131. Wing.



Figs.130-132. *Polymedon ethiopiensis* GRICHANOV, **spec. nov.**  
132. Antenna.



Figs.133-135. *Polymedon mulanjensis* GRICHANOV, **spec. nov.**  
133. Hypopygium.  
134. Wing.  
135. Antenna.



Figs.136-137. *Tachytrechus amnoni* GRICHANOV, spec. nov.

136. Hypopygium.

137. Antenna.

Обзор хищных мух подсемейства Dolichopodinae (Diptera: Dolichopodidae) Тропической Африки. Гричанов И.Я. Санкт-Петербург: ВИЗР РАСХН, 2004. 244с. (Приложение к журналу «Вестник защиты растений»).

Review of Afrotropical Dolichopodinae (Diptera: Dolichopodidae). Igor Ya. Grichanov. St.Petersburg: VIZR RAAS, 2004. 244p. (Plant Protection News, Supplement).

Приведены описания 61 нового вида, даны новые находки известных африканских видов. В процессе работы были исследованы голотипы 40 и паратипы еще 6 видов из коллекций Европейских музеев. Род *Katangaia* PARENT объединен с *Polymedon* OSTEN SACKEN, *Pseudohercostomus* STACKELBERG с *Paracleius* BIGOT. Следующие пары видов также синонимизированы: *Dolichopus flavocrinitus* BECKER (= *Dolichopus luteitarsis* PARENT), *Paracleius confusibilis* (PARENT) (= *Pelastoneurus benoiti* VANSCHUYTBROECK), *Paracleius micrurus* (PARENT) (= *Paraclius vadoni* VANSCHUYTBROECK), *Tachytrechus bracteatus* (WIEDEMANN), (= *Hercostomus muscarius* SPEISER) и *Tachytrechus tessellatus* (MACQUART) (= *Hercostomus ponderosus* FREY). Дано также новое название: *Polymedon octavianus* nom.nov. для *P. longifacies* (PARENT), нес BECKER. Представлен каталог и определитель 8 родов и 164 афротропических видов Dolichopodinae. Работа иллюстрирована 137 рисунками.

Рецензент: канд. биол. наук И.В. Шамшев

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